VOL. 74 NO. 5

textile bulletin

MAY • 1948

A complete report of the recent American Cotton Manufacturers Association convention is published in this issue. It begins on Page 105.

L.U.N.C. Commerce R.

JUN 2

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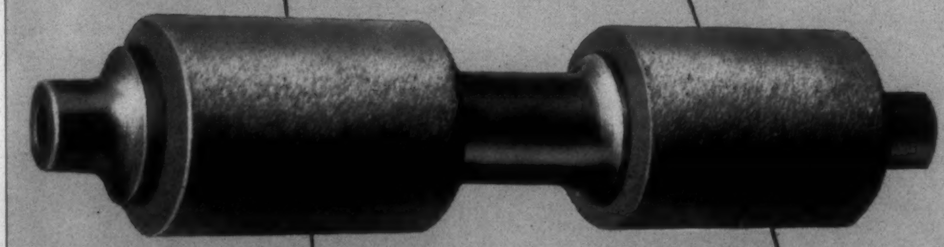


SONOCO

the Best in Cork Cots

1. Easiest cot to apply to roll.
2. Positive adherence via seamless gummed cloth lining.
3. Uniform density via bonded cork cushion.
4. Smooth running long life due to uniform wear.

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. HARTSVILLE S. C. MYSTIC CONN

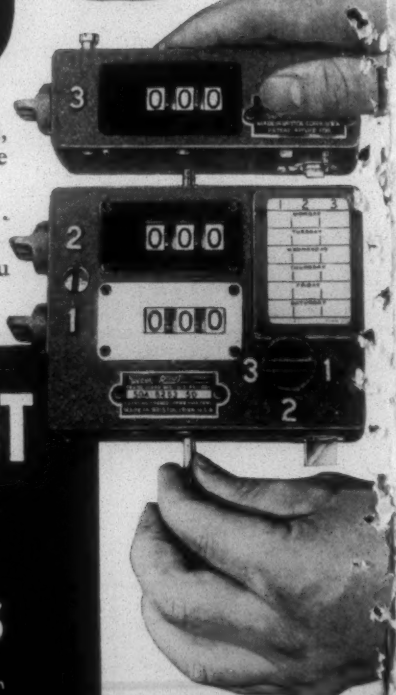
DEPENDABLE SOURCE OF SUPPLY

sonoco SERVE THE WORLD PAPER CARRIERS

REG. U. S. PAT. OFF.

Veeder-Root Vantage-Points

VEEDER-ROOT 2-3 PICK COUNTERS ARE EASIER TO READ



They're easier to read because the broad-faced wheels carry large, bold, lithographed figures . . . figures that are on the same plane with the surface of the wheel .

So you can read your production "news" easily from several feet away . . . without eye-strain.

This is one of many Veeder-Root Vantage Points which add up to give you top value in Veeder-Root 2-3 Pick Counters. *Look at all you get:*

QUICK CONVERTIBILITY
YALE LOCK PROTECTION
COMPRESSION CLAMP DRIVE
ALL PARTS CORROSION-TREATED
STRONG, LOW-WEIGHT WHEELS
STEEL MOUNTING INSERTS
EASY-RESETTING KNOBS
COMPLETE INSTALLATION

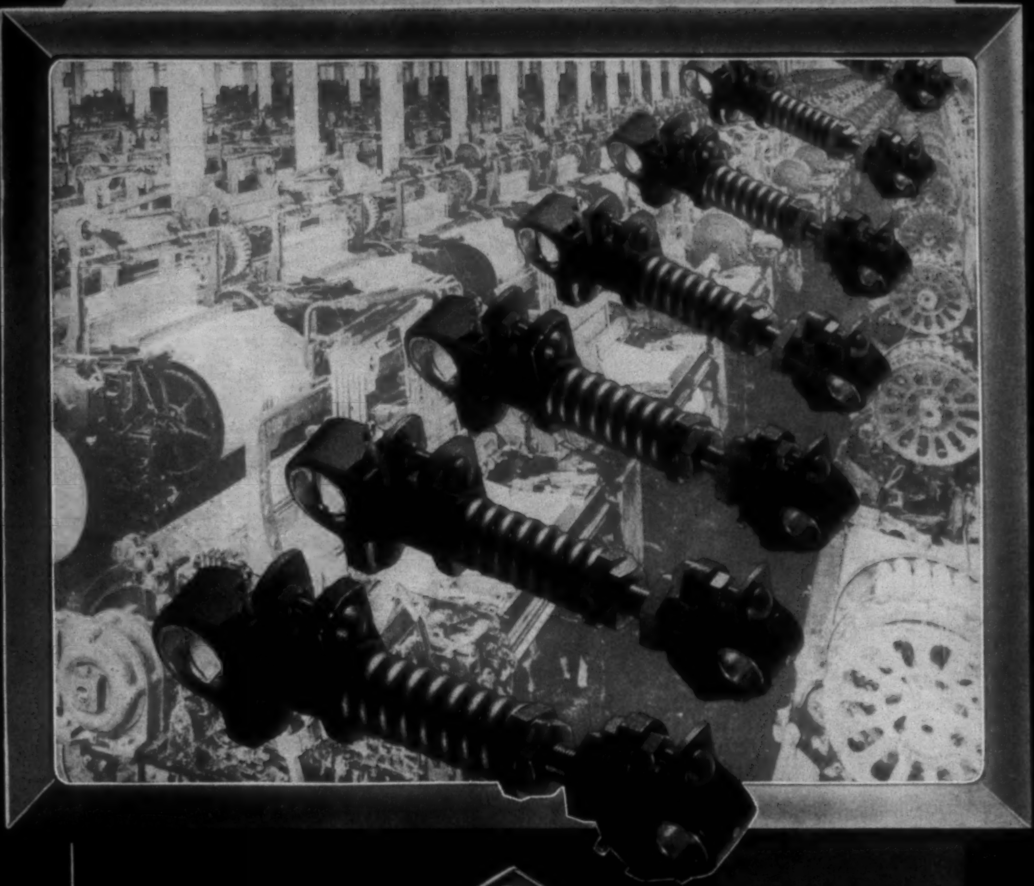
Have your Veeder-Root Field Engineer show you exactly what these Veeder-Root Vantage Points mean.

VEEDER-ROOT INC.
HARTFORD 2, CONN.
GREENVILLE, S. C.

OFFICES IN: Boston, Chicago, Cincinnati, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco, Montreal, Buenos Aires, Montevideo, Mexico City. In England: Veeder-Root Ltd., Dickinson Works, 20 Purley Way, Croydon, Surrey. In Canada: Veeder-Root of Canada, Ltd., Montreal.

VEEDER-ROOT
2-3
Pick Counters

Quickly Convertible from 2 to 3-Shift Operation
. . . Right in Your Mill



Have you equipped your looms with spring crank arms? With this application alone, mills have increased loom speeds by 7 to 20 picks per minute.

- Crank arm adjustment permits accurate setting of lay in relation to transfer motion and interrelated parts. Positive setting is maintained at all times.
- Coil springs absorb shock with resulting smoother loom operation.
- Replaceable bronze bushings and easily accessible grease fittings insure long crank arm life under severe mill conditions.

Replace wood crank arms with spring type crank arms. Derive the benefits of higher speed and more cloth per loom. Modern weave room methods call for up to date parts.

DRAPER CORPORATION

Armstrong's Accotex Aprons are available for single apron and double apron types of long draft equipment, and for roving as well as spinning frames.

ACCOTEX COTS
CORK COTS

Many are still producing quality yarn . . . after six years on mill frames

How long do the most durable aprons on your frames last? Many of Armstrong's Accotex Long Draft Aprons have been in continuous production for more than six years . . . and they still are producing top-quality yarn. This long life not only reduces apron costs but also means fewer shutdowns for replacements. Thus Accotex saves you money, labor, and production time.

The reason for this service record is the special Accotex Apron construction developed by Armstrong. Heavy layers of non-oxidizing synthetic rubber enclose a sturdy, non-stretch cord interliner. This provides a tough wearing surface on both the inside and outside of Accotex Aprons. The reinforced construction insures constant fiber control, too. Accotex Aprons can't stretch, grow, or sag.

You also get these important advantages when you install Accotex Aprons on your spinning and roving frames:

UNIFORMITY—All Accotex Aprons have the same composition throughout, and dimensions of every size are accurate.

SEAMLESS CONSTRUCTION—Accotex Aprons have no seams—no structural weaknesses to cause premature failure.

CLEAN RUNNING—Accotex Aprons do not crack or scuff. Thus they help produce cleaner-running work with less waste.

REDUCED LAPPING—Accotex Aprons are not affected by temperature or humidity. They perform with a minimum of lapping.

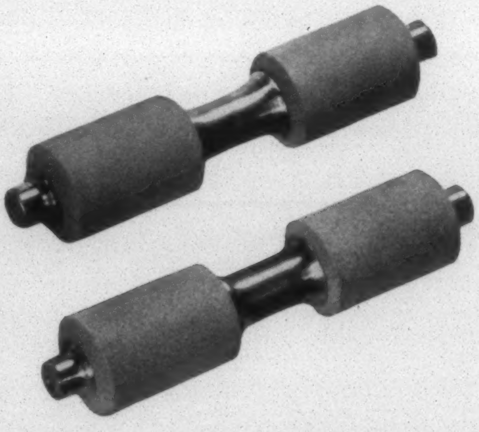
GOOD FRICTION—The efficient "grip" of Accotex Aprons reduces slippage.

Get cost figures on Accotex Aprons. Then check their durability and economy on your frames. Your Armstrong representative will gladly help you arrange a test installation. Call him today. Or write for samples, prices, and information on your particular application. Armstrong Cork Company, Textile Products Department, 8205 Arch Street, Lancaster, Pennsylvania.

ACCOTEX COTS . . . by the makers of Accotex Aprons

Armstrong's NC727 Accotex Cot gives you the advantages of both synthetic rubber and cork. This combination of toughness and high friction provides maximum eyebrow resistance in a synthetic cot. It also results in better drafting, high yarn strength, less slicking up. In addition, Accotex Cots offer long initial service life. They can be rebuffed 5 or 6 times.

Armstrong's J490 Accotex Cot is outstandingly superior in resistance to top roll laps. You can prove this right on your own frames. It is the cot to use where lapping is a serious consideration when running either wool or synthetic fibers on standard cotton system equipment.



Armstrong's Accotex Cots are now serving more spindles than any other roll covering. In addition to the NC727 and the J490, Accotex Cots are made in other formulations, with and without cork, for special services. Ask your Armstrong representative for recommendations on the best type for you.

ARMSTRONG'S ACCOTEX APRONS

WOODSIDE MILLS
GREENVILLE, S. C.

Plants:

Greenville, S. C.
Simpsonville, S. C.
Fountain Inn, S. C.
Easley, S. C.
Liberty, S. C.

Selling Agents:

Iselin-Jefferson Co., Inc.,
New York City

BROWN MFG. CO.
CONCORD, N. C.

☆

Manufacturers of

COTTON FLANNELS

Some People Leave Things to Luck!

BUT . . . *most* people like a sure thing better. They insist on dependable quality and consistent good service—frown on haphazard methods of doing business.

Dependability has always rated tops with Dundee. Year after year we have underscored its importance in all business transactions as well as in the constant quality of our products. This allegiance to high business standards has won for Dundee the confidence of our customers everywhere.

Dundee Mills

INCORPORATED GRIFFIN, GEORGIA

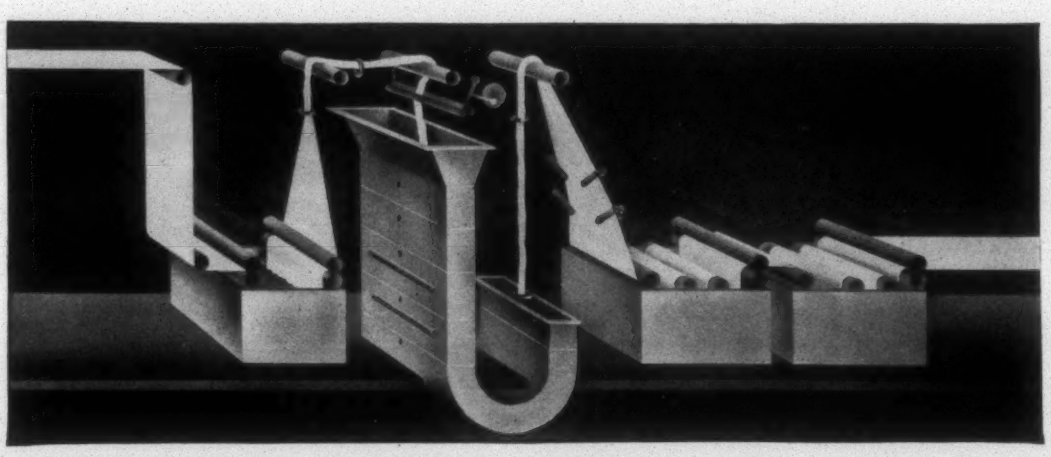
Manufacturers of Famous Nationally Advertised DUNDEE TOWELS

Plain and Name Woven Turkish Towels — Huck Towels — Dish Towels — Toweling — Crashes Damask Table Tops — Napkins — Diapers

Showrooms: **40 Worth Street, New York, N. Y.**

BECCO

CONTINUOUS STEAM BLEACHING



THAT highly important process between the grey room and the finishing plant or the dye house is illustrated herewith in principle. The key to success is the Becco method of rope—open-width bleaching, especially developed for heavy goods and for dyeing.

Becco Continuous Steam Bleaching means better quality, higher production, and shorter processing time at lower cost. It is a flexible method for handling various types and widths of goods.

Let Becco engineers and bleaching experts discuss with you your particular requirements. They can give you useful ideas on how to improve your present operations and help you plan for the future.

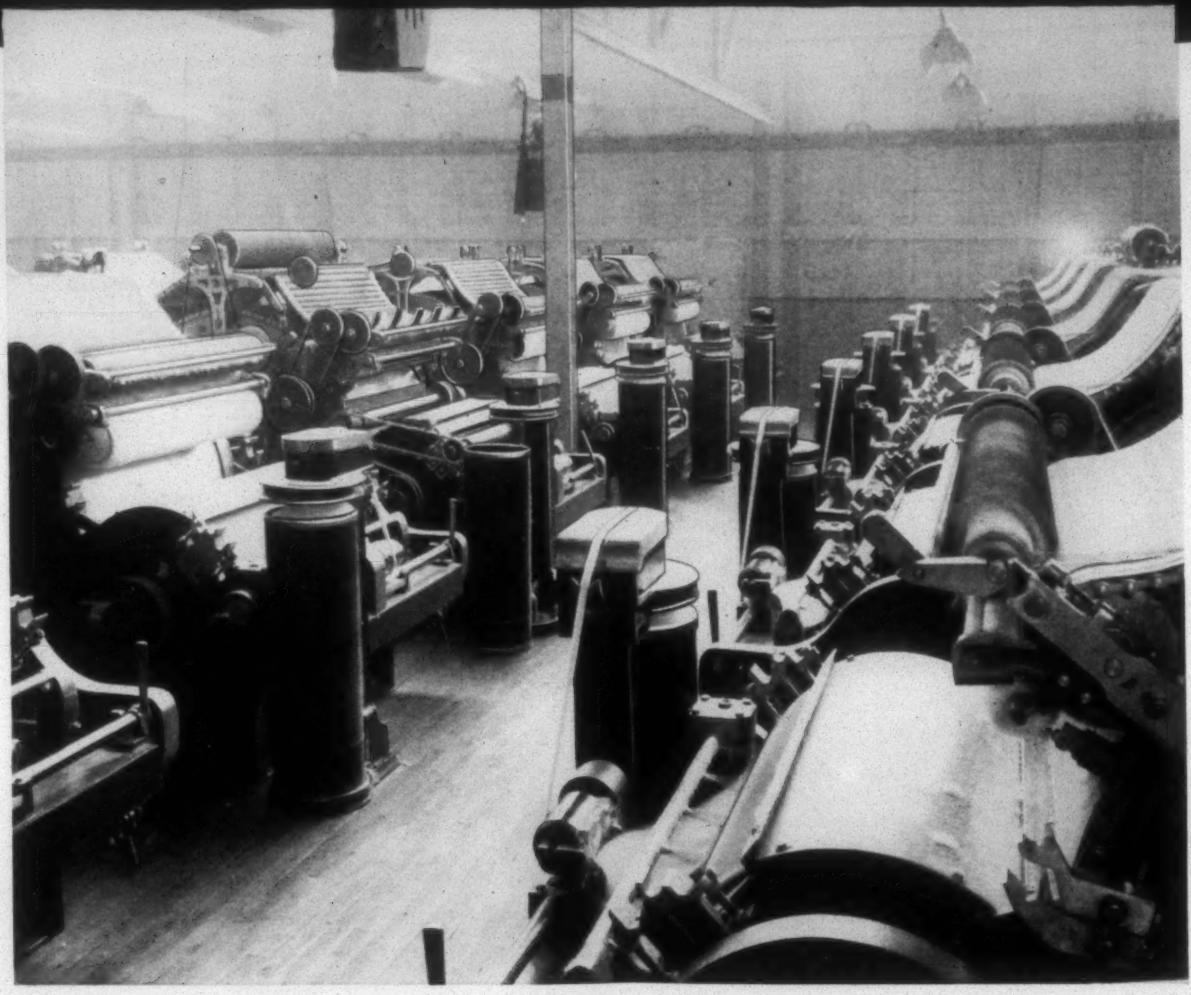
BECCO SALES CORPORATION

AGENTS FOR BUFFALO ELECTRO-CHEMICAL COMPANY, INC.

BUFFALO 7, NEW YORK

New York Boston Philadelphia Chicago Charlotte

H & B REVOLVING



A Recent Installation

The above photograph shows *a recent installation* of H & B Revolving Flat Cards with individual motor drive at the Veterans' Mill in Calhoun, Georgia. Mr. C. M. Jones, President of the mill, which makes coarse yarn for chenille rugs and spreads, states that these H & B cards are doing "excellent work."

H & B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND

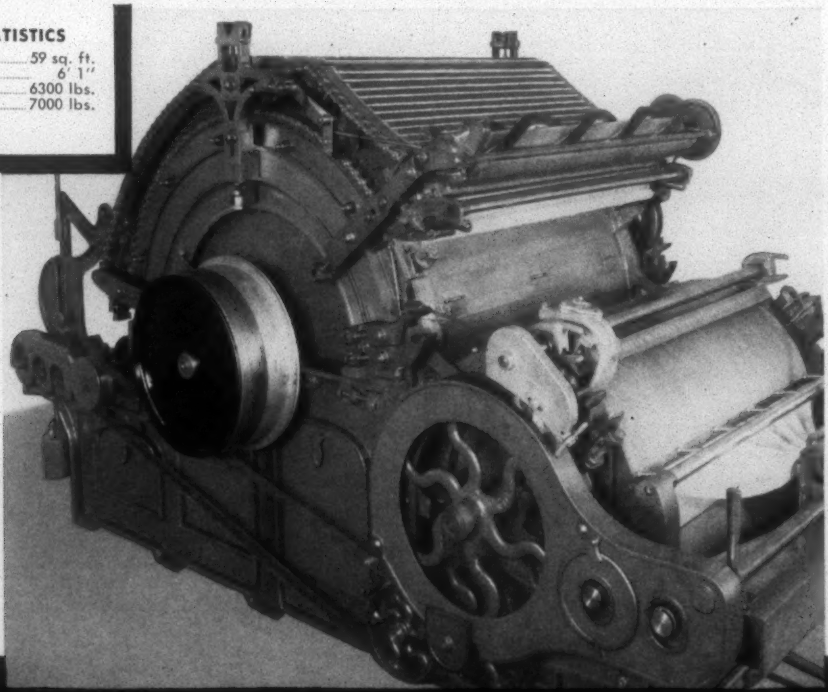
FLAT CARDS

The "excellent work" mentioned by Mr. Jones is characteristic of H & B Revolving Flat Cards. The following features, which are the result of quality design, materials and workmanship, make this kind of performance possible:

1. 5 distinct setting points, used singly or in any combination, to control setting to .001 inch.
2. Bends and flats perfectly concentric with the cylinder at every point.
3. Cylinder bearings made of phosphor bronze.
4. Pedestals adjustable either vertically or horizontally.
5. Feed roll weights below, instead of above, the roll.
6. Drop lever with new disengaging handle, and new actuating foot treadle.
7. Patent method for securing clothing to the flats.
8. Patent top grinding arrangement for grinding from the working seating of the flats.

INSTALLATION STATISTICS

Overall floor space	59 sq. ft.
Overall height from floor	6' 1"
Net weight	6300 lbs.
Gross weight (domestic)	7000 lbs.



MACHINE CO.

Textile Machinery

DIVISION PAWTUCKET, RHODE ISLAND, U.S.A.

BRANCH OFFICES
ATLANTA, GA.
815 CITIZENS AND SOUTHERN
NATIONAL BANK BUILDING
CHARLOTTE, N. C.
1207 JOHNSTON BUILDING

MANSFIELD MILLS Inc.
LUMBERTON, N. C.

Carded Broadcloth

Selling Agents
Textile Converting Co.
627 Broadway + New York

WALDENSIAN
HOSIERY MILLS
INCORPORATED
VALDESE, N. C.

Sales Office
Room 6724 Empire State Bldg.
New York 1, N. Y.

Piedmont Manufacturing Company

Piedmont, South Carolina

Division of
J. P. STEVENS & CO., Inc.
New York, N. Y.

"Have YOU tested this amazing new picker?"

Loom tests of STEEL-HIDE show that it cuts operating costs, reduces cloth spoilage, increases yardage and reduces maintenance.

STEEL-HIDE

. . . By Graton & Knight Gives You The Performance And Long Life You've Always Wanted.

No other picker combines such long service life with such smooth performance. Look at what STEEL-HIDE can do for you:

- **CUT OPERATING COSTS . . .** because STEEL-HIDE combines longer life with smoother operation. Shock absorption is tremendously improved . . . laminated raw-hide leather nose is accurately drilled to receive shuttle spur. Boxing problems are greatly reduced. STEEL-HIDE is interchangeable right and left hand . . . inventory is cut to a minimum.
- **REDUCE "SECONDS" . . .** rebound controlled . . . no kinky filling . . . because picker maintains true alignment on stick due to patented loop construction: leather cushion on front absorbs shocks — rubber cushion on back insures snug fit — steel lip prevents rocking.
- **INCREASE YARDAGE . . .** because exclusive, steel-and-leather construction gives longer loom service . . . fewer shut-downs. Heavy gauge steel sheath gives extra strength . . . leather gives perfect resiliency.
- **REDUCE MAINTENANCE . . .** because all parts associated with picker action last longer. Stick breakage is reduced . . . shoe wear is minimized.

STEEL-HIDE . . . its longer life is locked in steel

Designed to fit 1" x 19/32" stick only.

Order a test lot from your nearest Graton & Knight Distributor and find out in your own mill how STEEL-HIDE will perform for you.

GRATON & KNIGHT COMPANY

328 FRANKLIN STREET, WORCESTER 4, MASSACHUSETTS

LATEST ADDITION TO THE

GRATON AND KNIGHT

ORANGE LINE LOOM LEATHERS

A complete line manufactured by the world's largest manufacturer of industrial leathers

Plymouth Manufacturing Co., Inc.

Quality
**SHEETINGS
and
DRILLS**

McCOLL, SOUTH CAROLINA

The Randolph Mills
INCORPORATED

Manufacturers of
COTTON
FLANNELS

FRANKLINVILLE, N. C.

Baker-Cammack Hosiery Mills, Inc.

High Quality
MEN'S HALF HOSE

BURLINGTON, N. C.

DO YOU KNOW?

By Using BEMIS TITE-FIT TUBING

YOU

REDUCE labor and material costs, because you:

ELIMINATE handling heavy bales of burlap.

ELIMINATE time required to open bales and remove bale coverings.

ELIMINATE time required to cut burlap into sheets.

ELIMINATE using more burlap than necessary.

ELIMINATE all hand sewing.

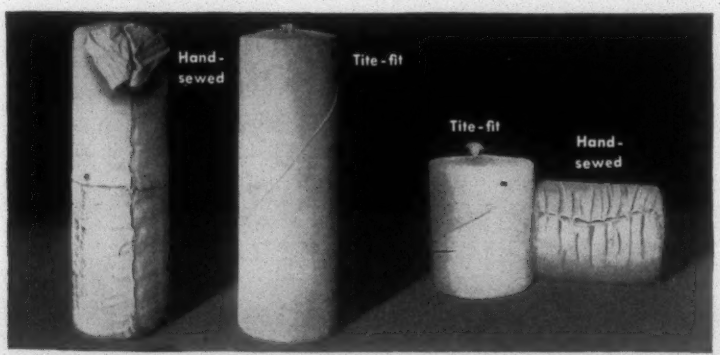
IMPROVE the appearance of your rolls.

YOUR CUSTOMERS

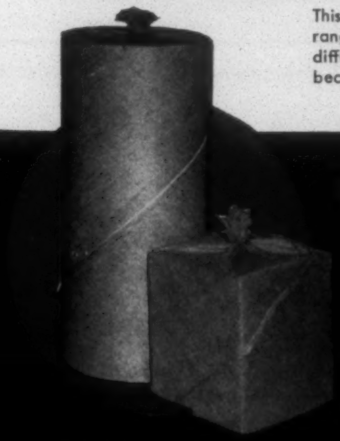
RECEIVE neat packages that are easy to handle, because there's a handy ear on each end.

SAVE TIME as TITE-FIT TUBING is easily and quickly removed. Just untwist wire tie at one end and slip tubing off.

ELIMINATE chance of cutting into contents and damaging goods, as no cutting of sewing thread or goods is necessary.



This versatile tubing fits almost any shape and a wide range of package sizes. One roll may cover many different diameters and lengths neatly, without waste because TITE-FIT TUBING has *stretch* in both directions.



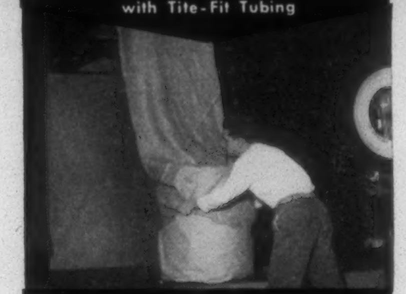
BEMIS BRO. BAG CO.

Brooklyn 32, New York

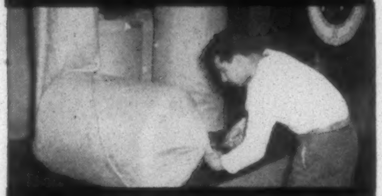
Canadian Bag Co., Montreal, and the Ontario Bag Co., Port Colborne, Ontario, are licensed manufacturers of TITE-FIT TUBING in Canada.

5 QUICK STEPS

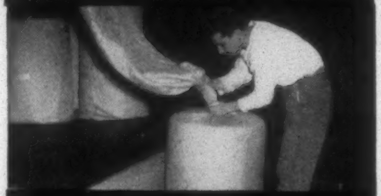
That's all . . . when you package with Tite-Fit Tubing



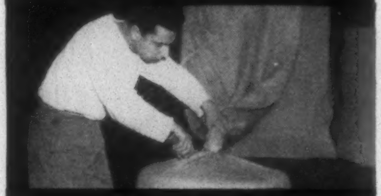
1. Pull tube well down over object leaving an overage to cover bottom.



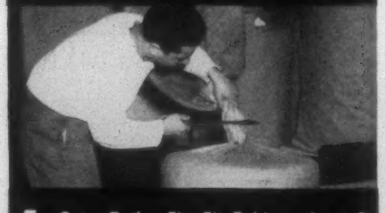
2. Turn package on side and fasten tube at bottom with a wire tie.



3. Turn package upright and use both hands to take up slack.



4. Fasten top with a wire tie close to object to assure tight fit.



5. Cut off the Tite-Fit Tubing about 3 inches above the wire tie.

MAIL COUPON NOW

Bemis Bro. Bag Co.
5114 Second Ave., Brooklyn, N.Y.

☐ Send descriptive folder on TITE-FIT TUBING
☐ Send sample. Our packages are approximately ______ inches in circumference. (Please specify)

Name ________________

Firm ________________

Street ________________

City ________ *Zone* ____ *State* ______

TEXTILES-INCORPORATED
GASTONIA, NORTH CAROLINA

Spinners of
High Grade
Combed Yarns

– Sales Offices –

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Chattanooga · Providence · Reading

CLINCHFIELD
MANUFACTURING CO.

MARION, N. C.

☆

Wide Print Cloths

☆

CHIQUOLA MANUFACTURING COMPANY
HONEA PATH, SOUTH CAROLINA

MANUFACTURERS OF

Converting Cloths

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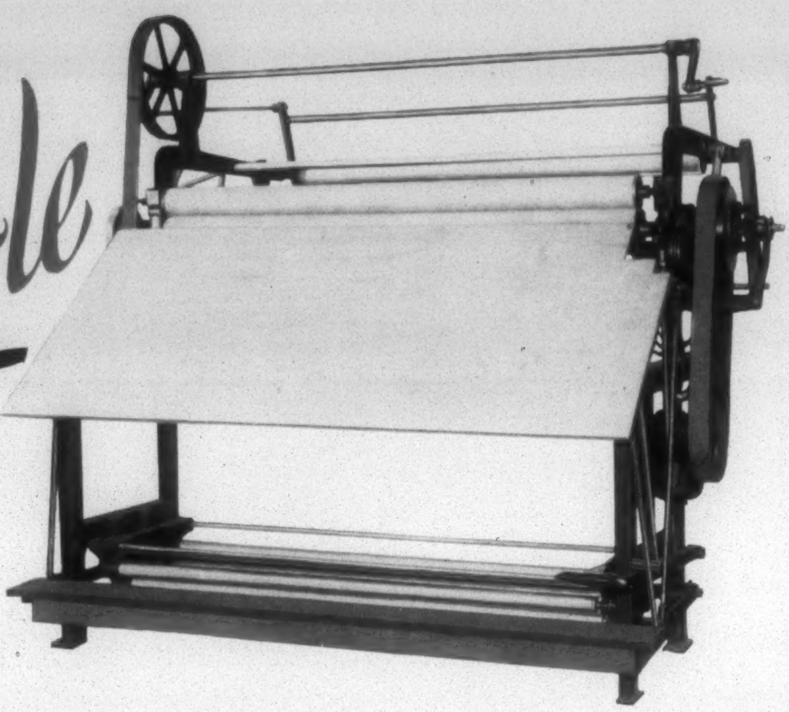
Selling Agents – HESSLEIN & CO. – 77 Worth St., New York, N. Y.

Adaptable



YOU WRITE THE SPECIFICATIONS!

There's a fundamental advantage to mill owners in Southern States Equipment Corporation's cloth inspection table. It is adaptable to **your** specific needs. The design pictured above is the basic operating mechanism. The construction is so highly versatile that any phase of the overall table can be furnished for simple and quick adaptation to fit **your** specific inspection problems. Clutch operating mechanism, piling device or other features of this basic design, which may be adapted to the modernization of your present tables, can be furnished.

√ √ *Check these **outstanding** features:*

√Clutch mechanism, with foot treadle release, permits jogging or inching without excessive wear—drives immediately forward when engaged!

√Easily loaded from either front or back and quickly threaded by operator.

√Available for any cloth width, with adjustable cradle guides to center any width.

√Quick-acting reverse mechanism, operated by foot treadle, leaves operator's hands free—provides **instantaneous** control!

√Upper cloth roller floats to allow for various thicknesses, bumps, wrinkles, seams, etc. Cloth roll unwinds in cradle with free turning removable rolls.

√Requires minimum of power in operation.

Mechanical Division Agents:

F. C. TODD, INC.
GASTONIA, N. C.

MATTHEWS EQUIPMENT CO.
PROVIDENCE, R. I.

Southern States Equipment Corp.
HOME OFFICE AND FACTORY
HAMPTON, GEORGIA

HENDERSON FOUNDRY & MACHINE COMPANY DIVISION

Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South

Locke Cotton Mills
CONCORD, NORTH CAROLINA

Manufacturers of
Drapery and
Upholstery Fabrics

☆

Alice
Manufacturing
Company

PRINT
CLOTHS

Easley, South Carolina

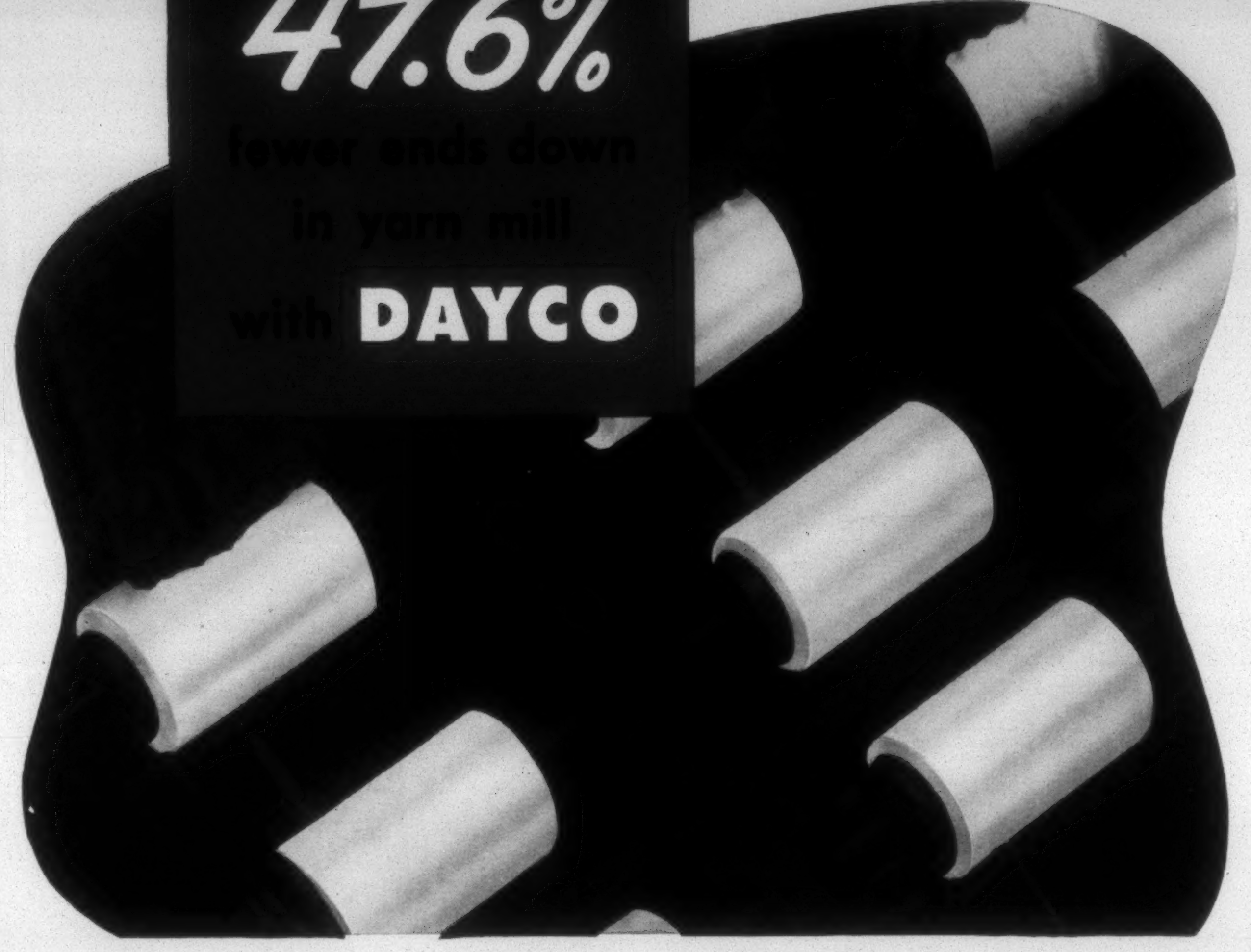
Spofford Mills, Inc.

MANUFACTURERS
OF **Carded Broadcloths**

Wilmington, N. C.

47.6%

fewer ends down in yarn mill with DAYCO



In a large yarn mill in central North Carolina, a test, run on 264 spindles equipped with *Dayco* Roll Coverings and 272 spindles equipped with a competitive make, the competitive roll coverings caused almost twice as many ends down, per thousand spindle hours, as did the *Daycos*.

As in many other tests, conducted under actual mill operating conditions, *Daycos* outperformed the competitive roll coverings by a wide margin . . . in this test . . . with 47.6% less ends down. To insure a fair test, both makes of roll coverings were run under identical circumstances of frame condition, temperature and relative humidity, and with the same kind of yarn.

Daycos outperform all other roll coverings in test after test, because they are built with exactly the right amount of cushion and the correct coefficient of friction to assure perfect drafting properties. Too, *Daycos* are not affected by temperature or humidity, which means their superior physical properties will remain constant throughout their long service life. In fact, the characteristics of *Dayco* Roll Covering are such that *Dayco's* surface drafting properties improve with use.

You can prove these things to yourself by trying *Daycos* on your frames. For complete information, write *Textile Products Division, The Dayton Rubber Company, Woodside Building, Greenville, S. C.*

DAYCO COT GRINDER

The Dayton Rubber Company

Write today for your free copy of Dayco's new Cot Grinder bulletin, No. A-550.

Dayton Rubber

GREEN RIVER MILLS, Inc.

TUXEDO, NORTH CAROLINA

☆

SPINNERS AND PROCESSORS OF
FINE COMBED YARNS

8s to 80s Single, 2-3-4-ply
Combed Peeler and Combed Sak

☆

Gassed, mercerized, bleached cones, tubes and skeins for the Thread, Weaving and Knitting Trades.

☆

Also Combination Specialty Yarns of Cotton, Acetate, Rayon and Wool.

65 YEARS YOUNG

This company was organized in 1883.

We value the faith, the loyalty and confidence of our employees, stockholders, customers and friends during these many years.

DARLINGTON MFG. CO.
DARLINGTON, S. C.

DRAYTON MILLS SPARTANBURG, S. C.

Manufacturers of

Fine Cotton and Rayon Fabrics

Selling Agents—DEERING, MILLIKEN & CO., 240 Church Street, New York City

IGEPALS

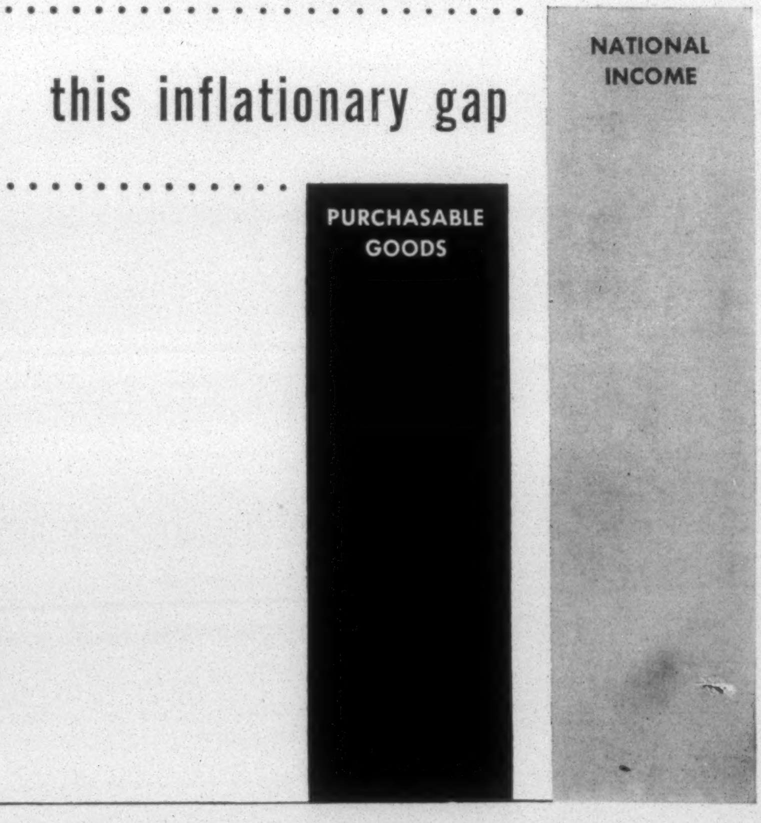
outstanding non-ionic surface active agents for wool, cotton and synthetic fibers.

- Excellent wetting, emulsifying and scouring properties
- Quick rinsing
- Readily soluble at all temperatures
- Equally effective in hard or soft water
- Neutral reaction
- Resistant to acids and alkalis
- Non-electrolyte—non-reactive
- Compatible with anionic and cationic compounds

Our skilled technicians are available for plant demonstrations.

GENERAL DYESTUFF CORPORATION
435 HUDSON STREET, NEW YORK 14, NEW YORK
BOSTON · CHARLOTTE · CHICAGO · PHILADELPHIA · PROVIDENCE · SAN FRANCISCO

HOW you and your employees can reduce this inflationary gap



With proper guidance from top management, the nation's workers can powerfully attack inflation at its source.

One way, of course, is by increasing production. But production of most goods already has been pushed to maximum! The other approach is to reduce the volume of dollars that can be used to bid up prices on scarce goods.

There's no more effective tool for this job than the Payroll Savings Plan for the regular purchase of U. S. Security Bonds. Via this plan, 5.5 million wage earners are investing over 8% of their pay—over 100 million dollars per month—in Bonds.

What Is the Status of the Plan in Your Company?

In companies where top management backs the Plan, 35% to 50% of the employees participate, and the average total Bondholding is $1200 per family. If these figures are above those for your employees, it is apparent that the Plan needs reinvigoration by your personal sponsorship.

Benefits Accrue to the Nation and to Your Company

Every Bond dollar that is built up in the Treasury is used to retire a dollar of the national debt that is potentially inflationary. Every Bond held means fewer dollars to go to market to bid up prices on scarce goods. In addition, dollars invested in Bonds are building future purchasing power. All these factors contribute to the security of the national economy—including your business.

Bonds build security for individuals, because every $3 invested pay $4 at maturity.

Moreover, in 19,000 companies operating the Payroll Savings Plan, employees have proved to be more contented. Worker production has increased, absenteeism has decreased—even accidents have been fewer!

Management's Role Is Vital

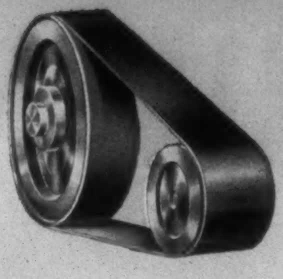
Even with all its benefits, the Payroll Savings Plan requires sponsorship by top management to keep employees *aware* of the benefits. That's why the Treasury Department has prepared a kit of materials especially for you to distribute among specific key personnel. Be sure to get and use your kit—for the security of your company and your country!

For any help you want, call on your Treasury Department's State Director, Savings Bonds Division.

The Treasury Department acknowledges with appreciation the publication of this message by

textile bulletin

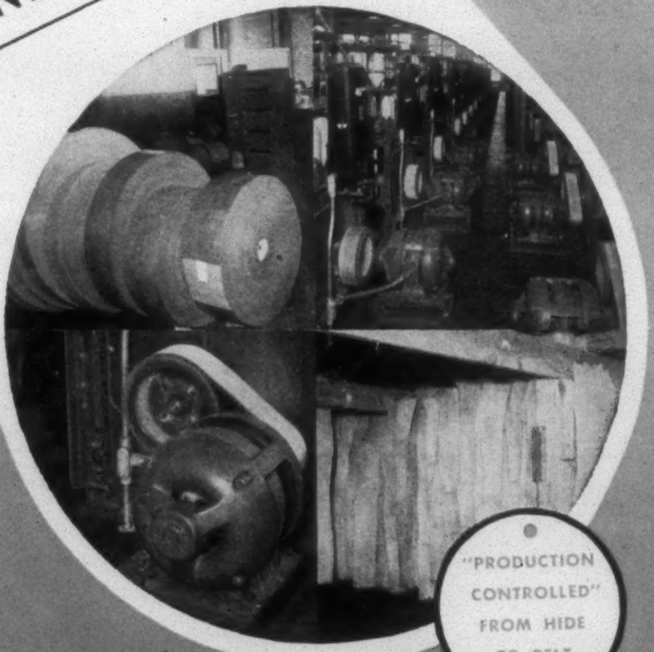
This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and the Advertising Council.



long-life

PIVOTAN

AMERICA'S FINEST LEATHER BELTING



"PRODUCTION CONTROLLED" FROM HIDE TO BELT

•POWER... DELIVERED!

Picking up power from the source and delivering it to a driven machine without too much loss along the way seems relatively simple. Most any belting can do a fair job for a while.

But if you're on the lookout for CONSTANT EFFICIENCY OVER A LONG PERIOD OF TIME, then consider first Southern Belting's *long-life, low-stretch, extra-grip* PIVOTAN. America's finest leather belting!

Southern Belting Company-Atlanta

Manufacturers and Warehouse Distributors

Leather Belting
Rubber Belting
V-Belts and Sheaves
Fiber and Metal Pulleys
Rockwood-Southern Pivoted Motor Drives
Westinghouse Motors

FOR LOW POWER

LILY WHITE OILS

ON SPINDLES

Reduction of power costs results from use of the right spindle oils, properly applied. Sinclair LILY WHITE OILS are finely finished lubricants possessing high stability characteristics to resist deterioration . . . increased body and deposits . . . during service. Use of the proper grade assures continuous low power consumption because there is no increased friction drag to cause power loss.

Besides contributing to low power consumption Sinclair LILY WHITE OILS help reduce maintenance cost by promoting long bolster life. Their worth was proven in many plants during the war years when mills were operating at top capacity and replacement parts were difficult to obtain. LILY WHITES come in viscosities to suit all operating speeds. Our lubrication counsel is available in solution of your problems.

SINCLAIR

CONSUMPTION...

TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL
WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVE., NEW YORK 20, N. Y.

BARRELED SUNLIGHT *SELF CLEANING OUTSIDE WHITE*

. . . and Company Houses Smile Again!

IT STAYS WHITE, BRIGHT AND RIGHT

Rather than reduce the quality of Outside Barreled Sunlight when first grade raw materials were "tight" we took it off the market. But NOW IT'S BACK — BETTER THAN EVER! With the first brush stroke you'll see that it's even whiter, more brilliant. And it actually becomes whiter and brighter *with time.* "Controlled chalking" removes dirt and dust in weathering . . . keeps the surface always clean in appearance. Moreover, *and most important*, it is that slow "controlled chalking" process that leaves a smooth, even surface that is readily repainted with a minimum of preparation.

Barreled Sunlight Outside White is a multiple-pigment paint, specially formulated for long-lasting protection and rock-bottom maintenance costs. Its flow, hiding power and meld have all been improved. It is the *quality* paint you need for a first-class, long-lasting paint job at an economical cost.

Ask a Barreled Sunlight representative to inspect your mill village or other residential properties. He can offer dollar-saving paint advice in matching the right Barreled Sunlight paints to your needs for exteriors and interiors of company-owned homes . . . in white or color combinations, if desired. Write U. S. GUTTA PERCHA PAINT COMPANY, 5-E Dudley St., Providence, R. I.

IS BACK BETTER THAN EVER

Get the "Inside" Story on How BARRELED SUNLIGHT Ups Worker Efficiency Through Better Light!

Light-meter tests prove beyond question that famous Barreled Sunlight WHITE paint on plant ceilings and walls makes seeing easier hence adds to worker efficiency. After painting with Barreled Sunlight, one large plant reports *30% more light!* Your Barreled Sunlight representative can supply helpful recommendations for painting mill interiors better — and at lower cost.

BARRELED SUNLIGHT *Paints*

In whitest white or clean, clear, pleasing colors, there's a BARRELED SUNLIGHT Paint for every job

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★ *Manufacturers of*

Cotton Yarns 10's to 20's
Cones, Tubes, Skeins
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There is only one HUNT SPREADER, the patent of Hunt Machine works. Since 1942 multiplied thousands of Hunt Spreaders have been installed on looms of all makes—old models and new. Results, from the words and letters of pleased textile executives, are these:

"Less Vibration" . . . "Better Fabric,"

"Reduced Weave Room Maintenance Cost,"

"Higher Loom Speeds . . . More Picks,"

"Fewer Seconds and Less Breakage"

"14% More Cloth Than When Looms Were New"

"You Modernized Our Weave Room."

Write or wire today to learn what Hunt Spreaders can do for YOUR looms.

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Cotton Yarns 10's to 20's
Cones, Tubes, Skeins
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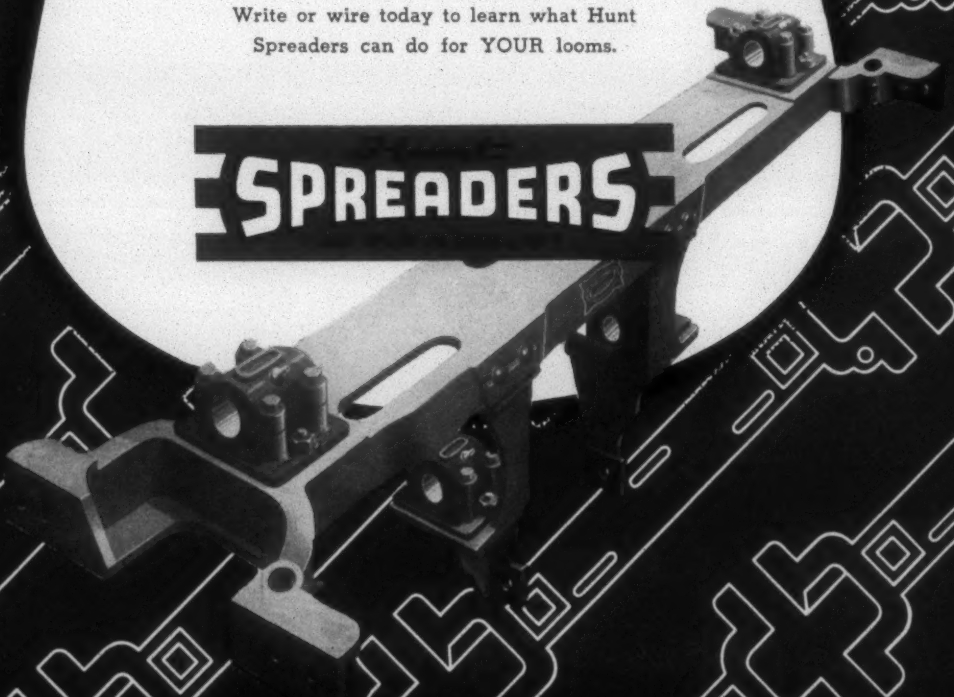
SPREADERS



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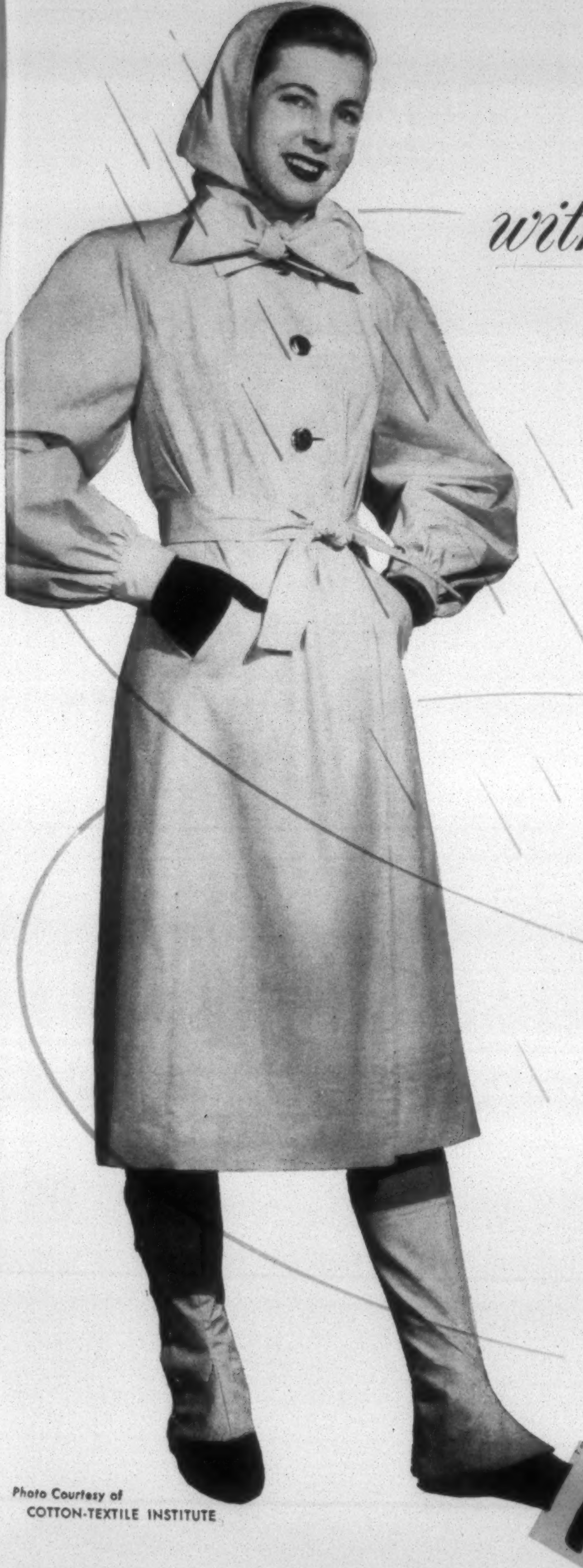

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COTTON-TEXTILE INSTITUTE

Nalex
FOR WARP SIZING COTTON YARNS

without rain togs

NALEX is a slow-congealing warp sizing starch that minimizes the use of moisture resisting tallow and similar fatty compounds. Just enough tallow is used to prevent sticking to the drying cylinders.

Remember this, any moisture resisting film on the yarn necessitates a high, uncomfortable humidity level in the weave room. Enough extra moisture must be present in the air to penetrate the water resisting film—if the starch component in the sizing is to be properly plasticized.

Conventional thick and thin boiling starches require an excessive fat complement to prevent fast congealing—and a humidity level that must be maintained at 80-90%. Slow-congealing NALEX, with its low tallow complement, requires only a 70-75% humidity.

NALEX penetrates deeper . . . is more adhesive . . . reduces shedding . . . and permits excellent weaving results—without loading the cloth with starch.

National also produces: **FLOTEX** to replace natural gums for printing; **SPUNJEL** for warp sizing spun rayon, **AMBERTEX** a heavy-bodied thickener for white discharge, direct and vat color printing; **FIBERTEX** for textile finishing; **VAT THICKENER 36** for cotton and rayon colors.

Offices: 270 Madison Avenue, New York 16; Boston, Philadelphia, Atlanta, New Orleans, Indianapolis, Chicago, San Francisco and other principal cities. In Canada: Meredith, Simmons & Co., Ltd. Toronto and Montreal. In Holland: Nationale Zeetmeelindustrie, N. V., Veendam.

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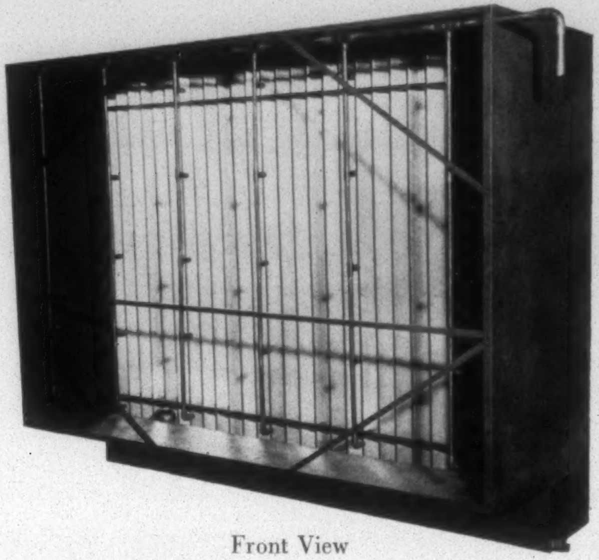
You Can Keep Your Plant



Front View

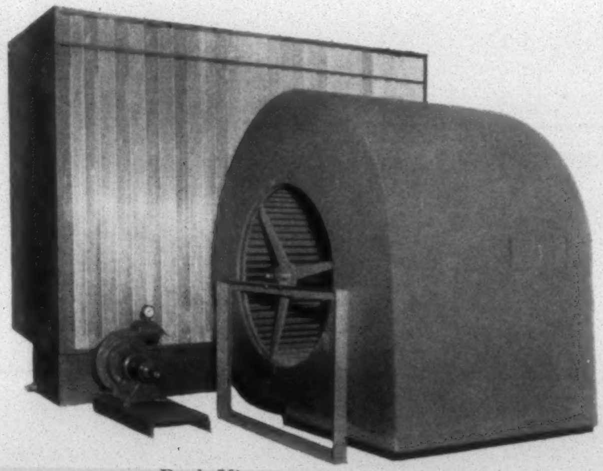
Comfortably Cool WITH AIR-KON

The Practical Air-Conditioning System

"AIR-KON" is a big step forward in industrial air-conditioning. It is simple in principle yet wonderfully effective in reducing the temperature to a comfortable level. Cleans the air while it cools.

Easily installed in any department of the plant, including offices, at small installation expense. Adaptable to Churches, Schools, Theaters, Cafes, Super Markets, and Stores.

This is a Custom Built Unit and is manufactured to fit your individual requirements. Each unit consists of a blower, a series of pipes encased in a cabinet, and a pump which forces the water at high pressure through dozens of nozzles, thus forming an infinitely fine spray through which the air is drawn before entering the room. Nothing to go wrong, so requires no upkeep or service. Thermostat or manually controlled.



Back View

"AIR-KON" is an investment that pays for itself in greater and higher quality production during the hot summer months. Our engineers will be glad to make a survey of your plant without any obligation whatever, and at the same time will show you the results that are being accomplished with this system in other plants in your field.

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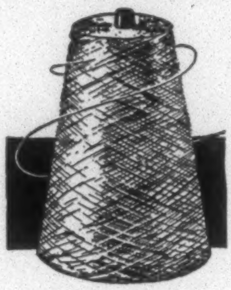

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Bleachers – Dyers – Mercerizers
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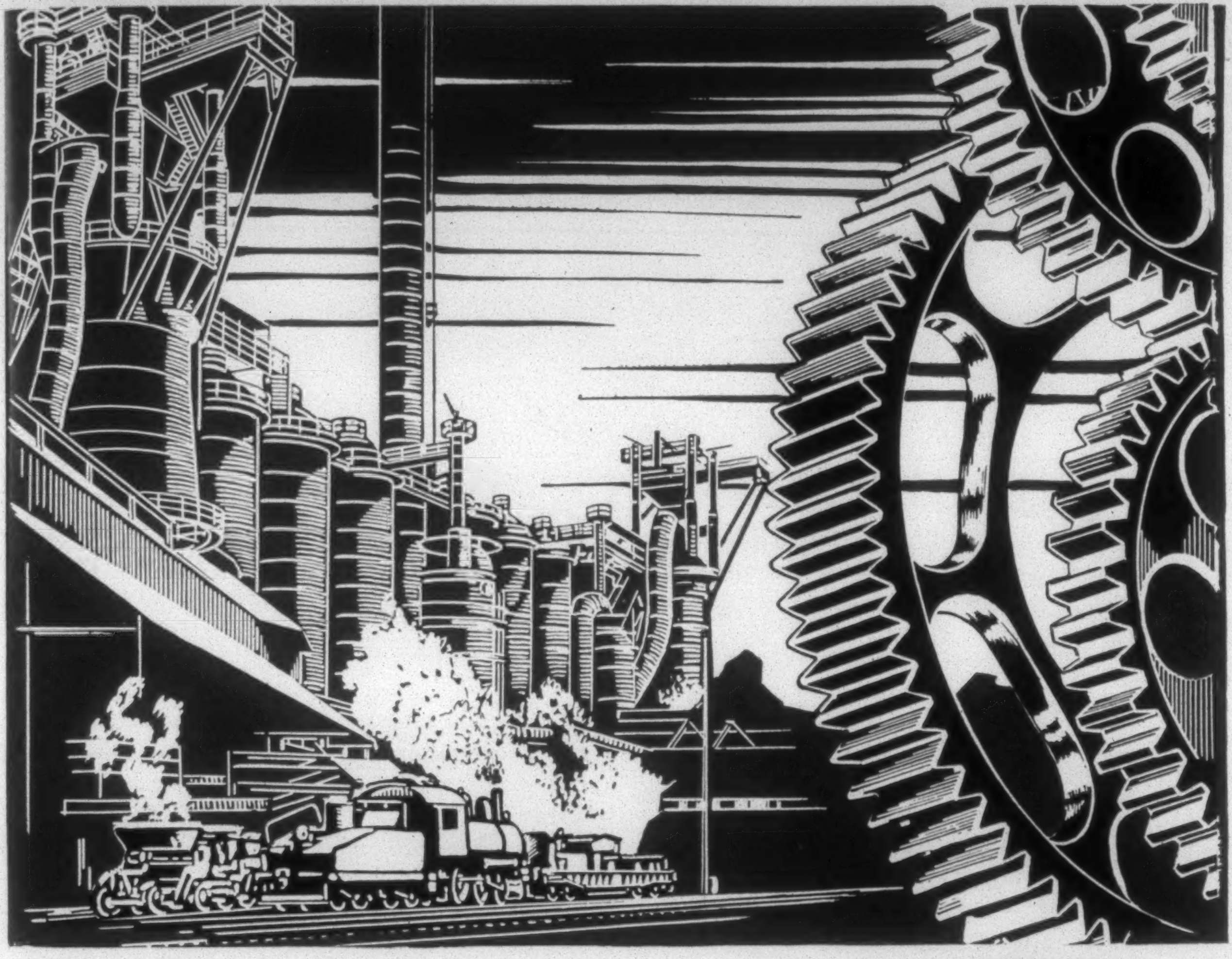
YES! Tycol "Engineered Lubrication" performs better . . . BETTER . . . BETTER



Tycol Engineered Lubrication performs better because:

. . . *Tycol Engineered Lubrication* is scientifically engineered to meet every service condition in modern industry, no matter how extreme or unusual.

. . . *Tycol Engineered Lubrication* helps you "get it done" faster and more efficiently . . . production jumps when you switch to a Tycol oil or grease.

. . . *Tycol Engineered Lubrication* means new economies for you . . . by cutting repair bills, and lengthening equipment life.

Let Tide Water Associated help you select the best lubricant for your particular need. Write, wire or phone today to your nearest Tide Water Associated Office.

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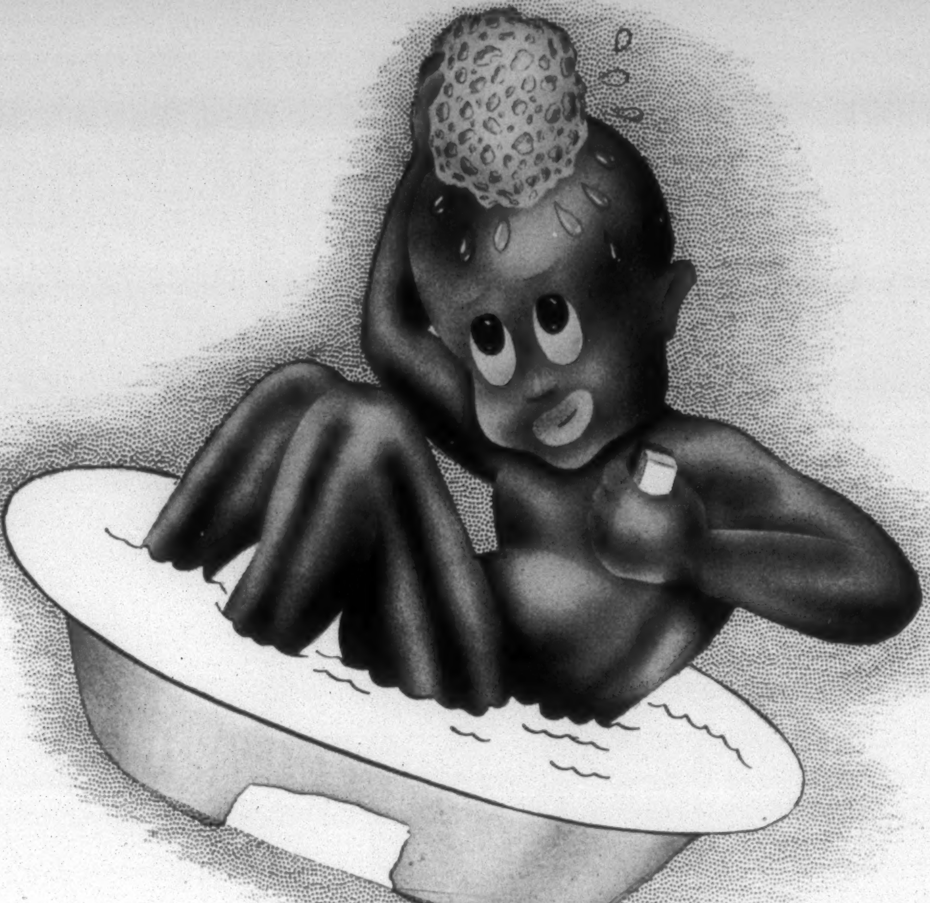
Best Wishes to the A. C. M. A.



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Additional production now available. Inquiries invited.

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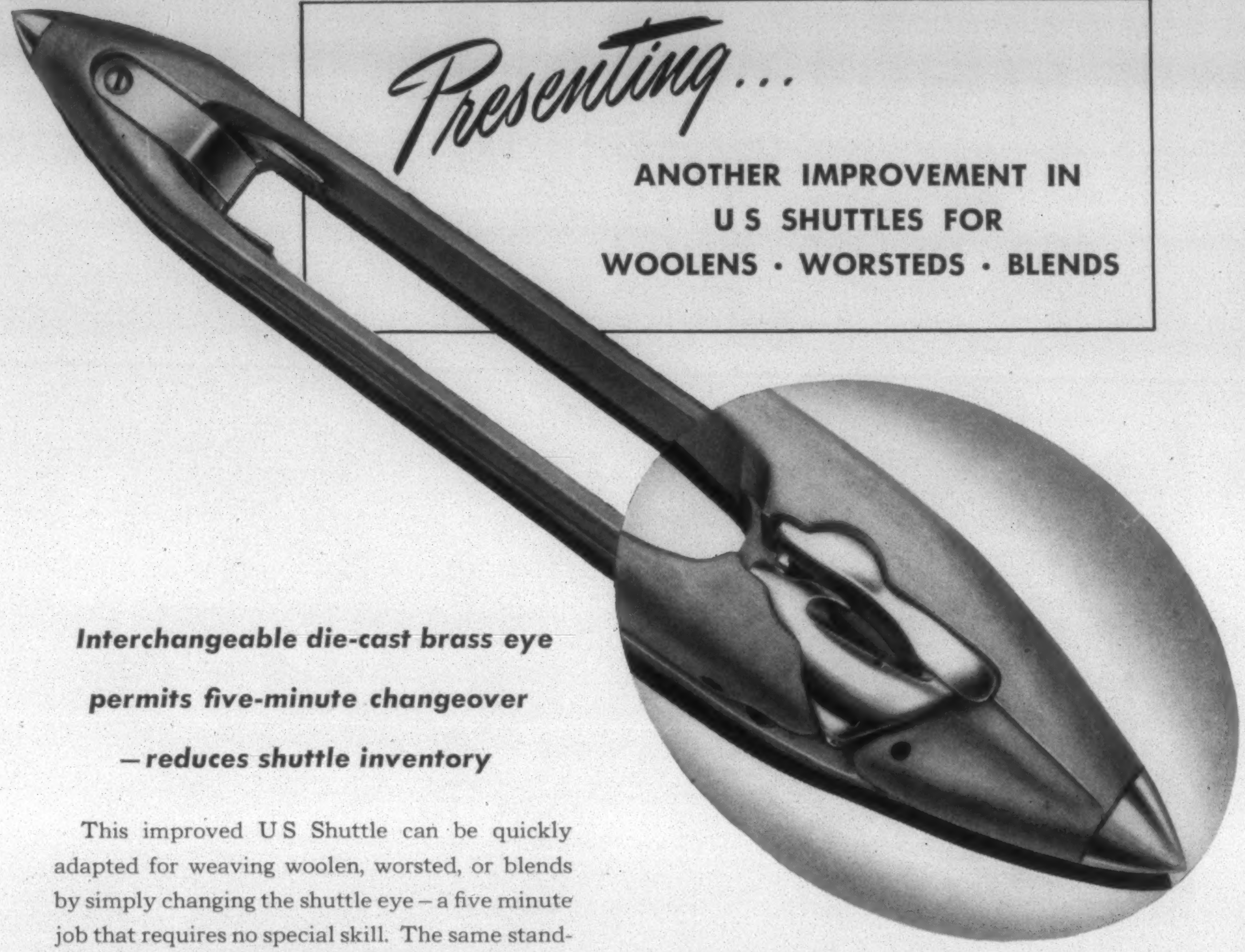
Presenting...

ANOTHER IMPROVEMENT IN U S SHUTTLES FOR WOOLENS • WORSTEDS • BLENDS



DIE CAST BRASS EYE, formed to meet tolerances of .004 to .005 inch, permits complete interchangeability. Shuttle above is fitted for worsted or blend weaving, with eye equipped with Jackson Pad Tension Device.

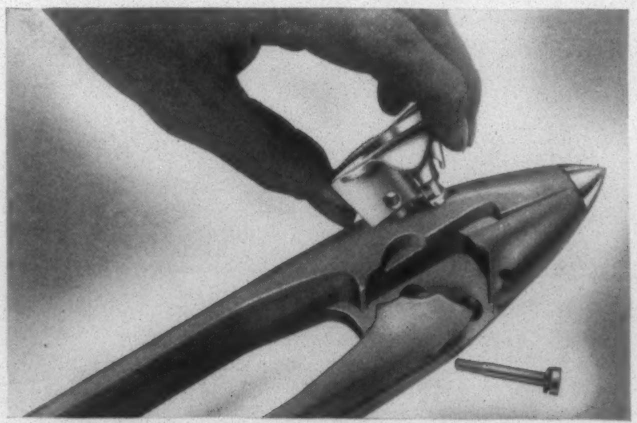
Interchangeable die-cast brass eye permits five-minute changeover —reduces shuttle inventory

This improved U S Shuttle can be quickly adapted for weaving woolen, worsted, or blends by simply changing the shuttle eye – a five minute job that requires no special skill. The same standard shuttle can be equipped with a plain eye for woolens, Jackson Tension eye for worsteds, or a reverse eye for lefthand twist. Accurately dimensioned, each eye seats to a true fit without fussy adjustments. The same eyes can be used in any length shuttle.

This advanced feature lowers weave room costs by permitting full production with a limited number of shuttles. It also simplifies and speeds up normal maintenance.

Mill-tested under the most severe conditions, this new shuttle will materially increase the efficiency of your weaving operations – yet it costs no more. Be sure to see it before you place your next shuttle order. A U S representative will be glad to demonstrate its advantages.

AVAILABLE FOR PROMPT DELIVERY



IN LESS THAN 5 MINUTES, by removing one screw, lifting out worsted eye and inserting plain eye, shuttle is converted for weaving woolens.

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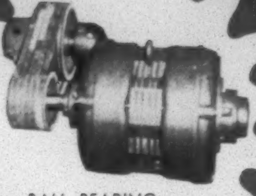

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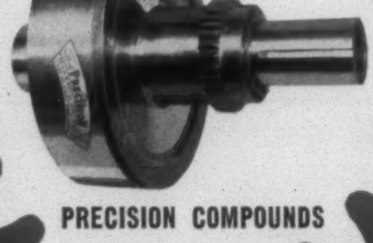

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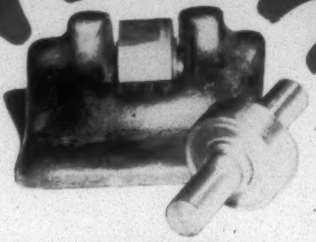

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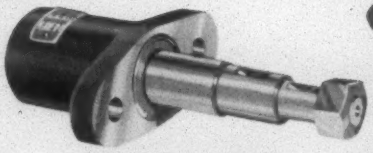

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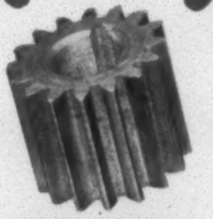

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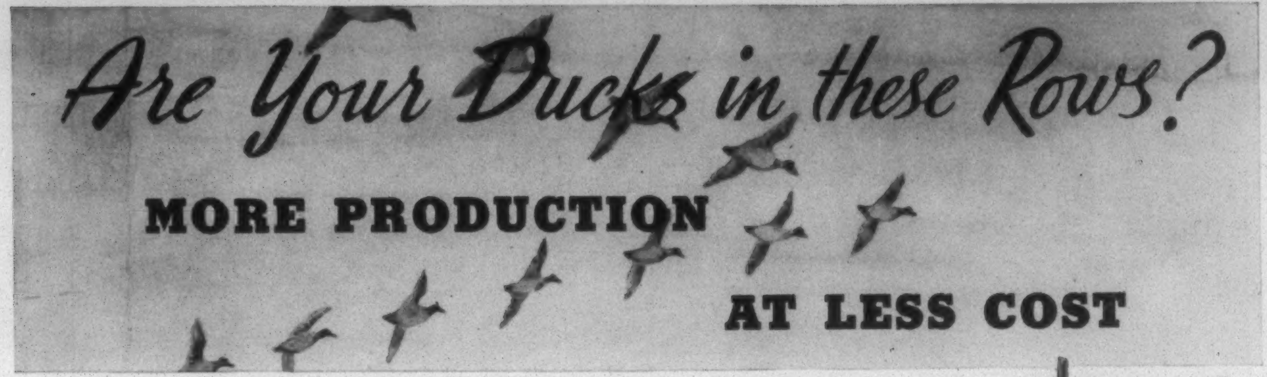

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AT LESS COST

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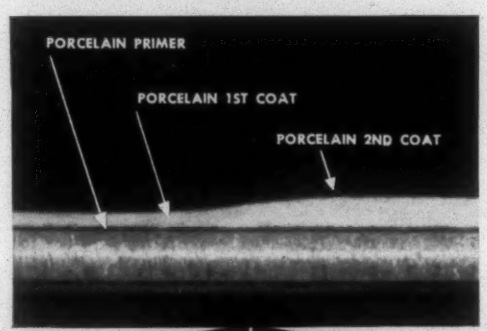
THE NEW *Textilume* VITREOUS PORCELAIN-SEALED FLUORESCENT LIGHTING FIXTURE

This cross section photograph (magnified) shows the first, second and third coats of porcelain enamel on a typical Wheeler reflector. Notice the unvarying thickness of each coat.



OTHER "SKILLED LIGHTING" FIXTURES

There's a Wheeler Incandescent or fluorescent fixture to meet every mill requirement.

DESIGNED TO RESIST MILL HUMIDITY

THIS FULLY PROTECTED NEW UNIT has a one-piece, all-welded steel body completely sealed in seamless vitreous porcelain enamel. Its surface is absolutely free from cracks or crevices where moisture could collect and cause rust. Vitreous porcelain enamel finish is a feature of Wheeler "Skilled Lighting" . . . developed over a period of 67 years. It has earned unusual reputation for glass-like smoothness, dependably high quality and uniform thickness . . . assuring long, trouble-free service under the most rigorous moisture conditions.

The Textilume gives maximum illumination from standard lamps because it *controls light*. Its high reflection factor puts light to work where it belongs . . . on the job. All parts are easily accessible. Latest type safety lamp holders are automatically self-adjusting to lamp length.

Insist on these "Skilled Lighting" features when you step up the lighting efficiency of your mill. Get their money-saving, labor-saving advantages. For complete information, write Wheeler Reflector Company, 275 Congress Street, Boston 10, Mass.

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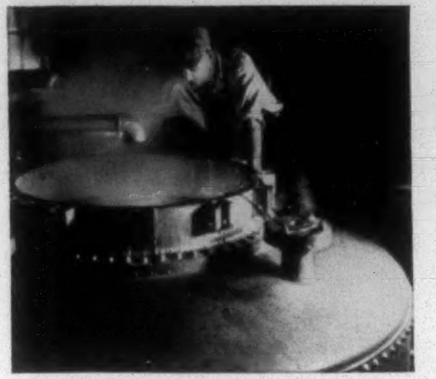
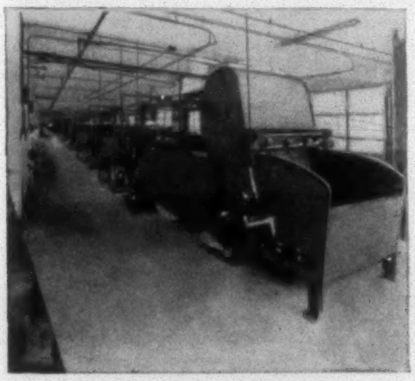


KIER-BOILING OF COTTON

Clean, Absorbent Cottons

After weaving, grey goods are kier boiled with caustic soda under pressure for 8-12 hours to remove gums, waxes, pectins and motes. The ideal soap for this job is Armour's CERTIFIED—because CERTIFIED provides more rapid penetration into the fiber and better emulsifying properties. CERTIFIED, a vegetable fatty acid base soap, not only loosens dirt thoroughly—but also holds it in suspension until these impurities can be flushed away. Results: soft, clean absorbent fabrics ready for subsequent bleaching, dyeing and finishing operations.



RAW WOOL SCOURING

Soft, Lofty Wool

Raw wool is scoured to emulsify and carry away the natural grease and foreign matter on the wool. Since scouring is done at 115-120° F., the soap used should have a low-titer for ready solubility and rinsability. Armour's TEXSCOUR is your answer! TEXSCOUR forms a grease emulsion which can be broken down readily to reclaim the lanolin—and yet the emulsion is tight enough to carry away the grease and dirt. Besides, TEXSCOUR, a red oil base soap in flake form, exerts a buffering action on the wool and gives a softness to the hand which synthetics do not permit.

PACKAGE DYEING OF YARNS

Even, Uniform Dyeing

In package dyeing, the dye solution must penetrate rapidly, thoroughly and give the same shade to the inside as to the outside of the package of yarn. So in this case you need a synthetic detergent with high wetting and penetrating properties rather than a soap with high detergency. You need Armour's No. 412 REGAL Detergent. No. 412 gives you the powerful penetration required to prevent channeling of the solution and to provide ready access of the dye to all parts of the package. No. 412 is completely stable and effective under all dyeing conditions for all types of fibers.

Remember, There are Armour Soaps and Synthetic Detergents to Solve All Your Textile Problems.

ARMOUR and Company

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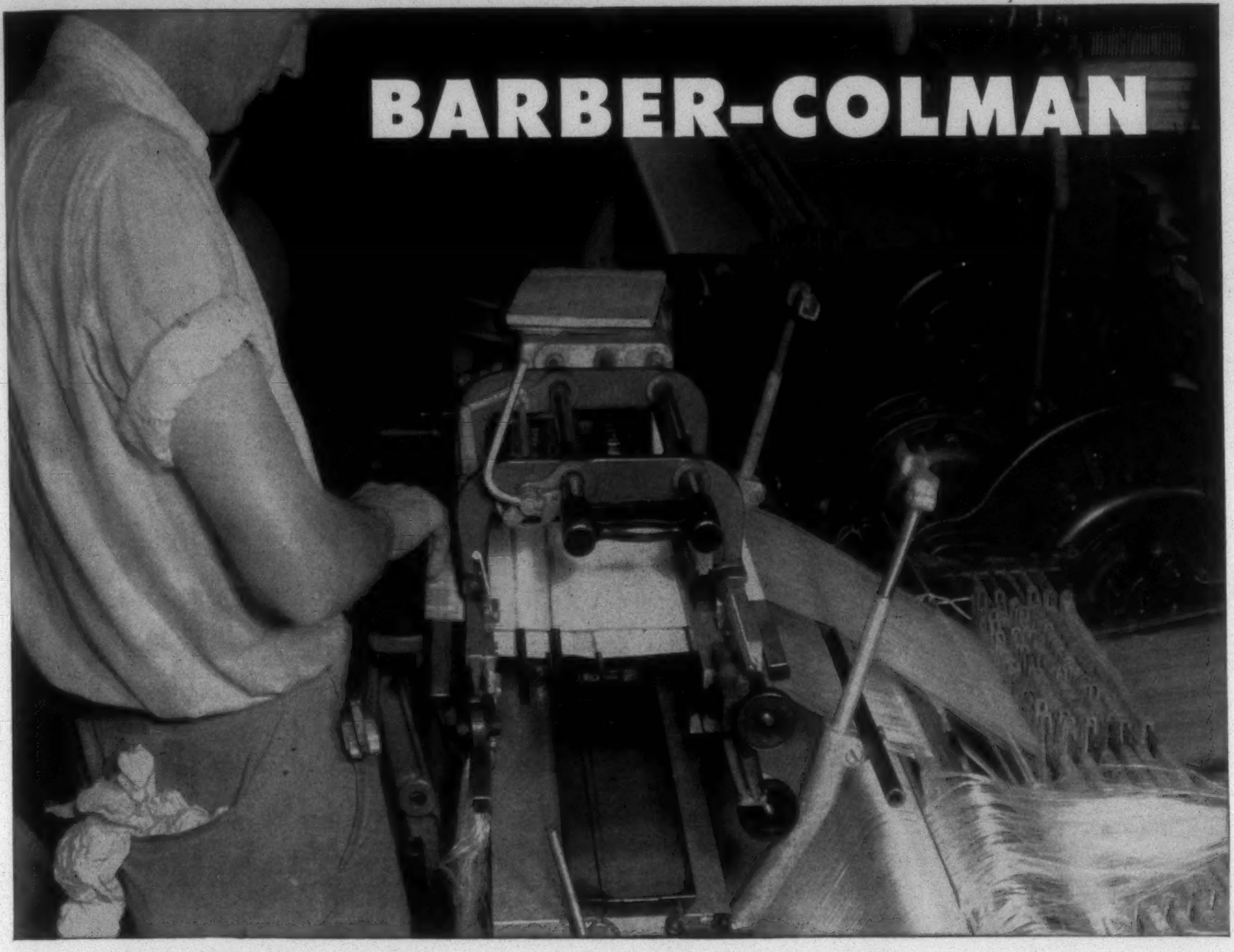
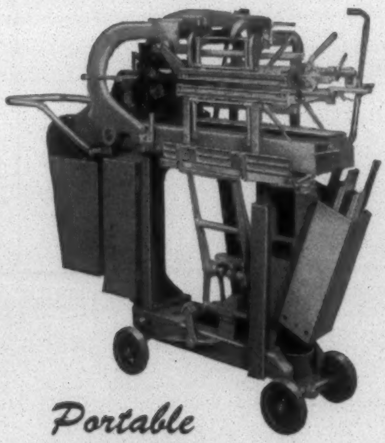
Congratulations to the A. C. M. A.
On Their Service to the Industry



BARBER-COLMAN

PORTABLE WARP TYING MACHINES MAKE SUBSTANTIAL COST SAVINGS IN SMALL MILLS



Portable
WARP TYING MACHINE

Many of the smaller mills are finding that a Barber-Colman Portable Warp Tying Machine is a profitable investment — even though its full-time capacity is not needed or used. This machine offers a fast and accurate means for tying-in new warp *at the loom.* It can be handled satisfactorily in confined and hard-to-reach spaces and in loom alleys as narrow as 12″. An inexperienced hand can learn to operate it capably in a comparatively short time. Overall production capacity of the machine averages 3500 to 4500 ends per hour, varying with the sley of the warp. On high sley warps, production may run as high as 5500 ends per hour. Interchangeable knotter units enable the machine to tie a wide range of counts, and models are available to handle cotton, wool, silk, or synthetics. Tying is accurate and uniform and so much more efficient than common hand methods that the machine will pay for itself quickly in cost savings. *For full details and specific recommendations for your mill, consult your Barber-Colman representative.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.
FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND

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24's to 30's IN WARPS, SKEINS and TUBES

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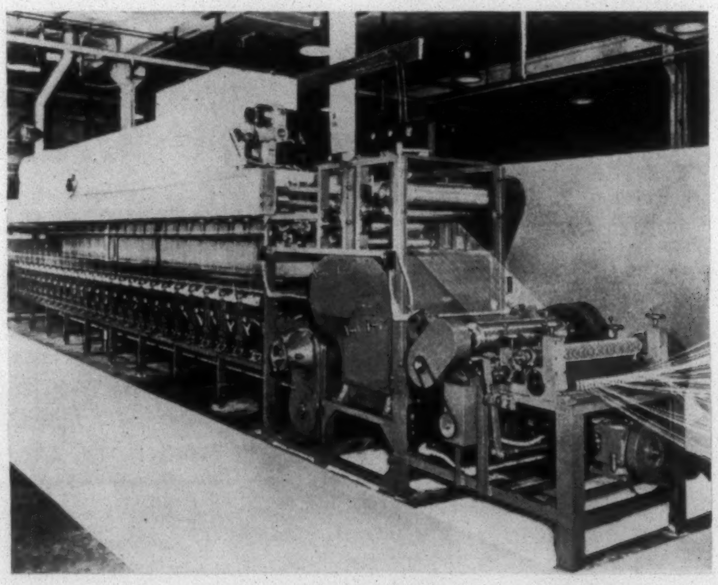
You Should Investigate the
FIBER BONDED PROCESS
with the Latest Improvements
Multiple-end Fiber Bonded Machine
for Treatment of Yarns and Rovings



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The *FIBER BONDED process is applicable to cotton, rayon, nylon,* and other textile materials. Superior products and new products are being developed constantly. If you manufacture any industrial yarns or fabrics, an investigation of this process may change your present plans.

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For detailed information and licensing plan write—

Licensing Division
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DANVILLE, VA.

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the Saco-Lowell J•3 Controlled Draft Roving Frame continues to meet the higher standards of uniformity, evenness and economy

Its simplicity of design, ruggedness of construction, efficient operation and low maintenance cost make it a profitable investment in these and many other mills:

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Dallas Cotton Mills
Dominion Textiles Co., Ltd.
Firestone Cotton Mills
Glendale Spinning Mills
Henrietta Mills
Imperial Cotton Mill
Joanna Textile Mills Co.
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Answer: *South Carolina Mills is the Only Mail Order Company in America Selling COTTONS Exclusively!*

Correct! And because we sell only Cotton merchandise, thousands upon thousands of our customers have discovered Cotton's versatility, durability and washability . . . its color and smart styling! They have found a new, easy way to save money on Cottons, too. Our customers buy with confidence because every item ordered carries a money-back guarantee of complete satisfaction. You will discover hundreds of Cotton values in our new Spring and Summer Catalog. Here are a few of the many types of Cottons offered in your copy of this attractive "Show Case of Cottons":

Lovely Caroline "Original" Patterns (piece goods)
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Startex Decorative Fabrics
Fine Quality White Goods

Men's and Boys' Sportswear
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Women's and Girls' Sportswear
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Rugs, Bed Spreads, Curtains, etc.

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Although the Spaniards, lusting for gold, crushed the Aztec Empire in 1519, the natives preserved a vestige of their culture in the products of their handiwork. As the centuries passed, their artistry became part of the Mexican heritage, until brilliant yarn dyed blankets and hangings were a permanent fixture in the homes of the wealthy grandees of New Spain. Then, as now, COLOR sold textiles.

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the bulletin board

Questions, answers, comments and other material submitted by the readers for use in this column should be addressed to Editors, TEXTILE BULLETIN, P. O. Box 1225, Charlotte 1, N. C. All material will be edited properly before publication.

AMPLIFICATION AND CORRECTION

Sirs:

Please accept this letter as authority to furnish us with 500 reprints of the article, "Concrete Floors For Weave Rooms," by C. J. McCormack . . . published in your April issue.

L. S. Schwartz
The Monroe Co., Inc.
10703 Quebec Avenue
Cleveland 6, Ohio

¶ The staff wishes that mill men had seen the reprints instead of the original article, since engineering of Mr. McCormack's floor was fouled up in the magazine. The author's original explanatory lines for the illustration on Page 90 said "studding is 8 to 12′ apart and parallel;" during editing this evolved into "studding is eight to 12 *inches* apart and parallel." Inches became feet before the reprints were made, but not before the magazine was published. We humbly admit that there is quite a difference between (′) and (″).—*Eds.*

FABRICS OVER THE COUNTER

Sirs:

I have heard that there are a number of cotton mills which sell yard goods on a retail basis by mail order direct to the customer. If this is so, and if you have such information available, will you please send me the names and addresses of three or four such firms?

Mrs. David Weisberg
22 Scheneridge Avenue
Pittsburgh 27, Pa.

¶ Some plants have retail stores in their mill communities, but we doubt that many do a mail order business.—*Eds.*

REMEMBRANCE OF THINGS PAST

Sirs:

I appreciate very much the kind manner in which you printed my "Some Bits of Gaston County Textile History" (March, 1948, issue), and I thank you for the extra copy of the BULLETIN containing it.

Your TEXTILE BULLETIN is a dignified and worthy representative of the marvelous textile industry in the South, whose growth I have watched with pride and amazement from its small foundations in the 1860s, and its brave experiments in the 1870s and 1880s. We should not forget the men whose energy and character made our present victories possible.

James Lee Love
610 Fountain Place
Burlington, N. C.

¶ To put it another way, growth of the South's textile industry resulted from hard work — not theft, as Massachusetts' lieutenant-governor indicated.—*Eds.*

TEXTILES IN PAKISTAN

Sirs:

I enjoyed my visit to your publishing plant, and it was indeed a pleasure to have met you. . . .

We in Pakistan have surplus cotton 1$\frac{1}{16}$th-inch staple, and there is no reason why we should not set up our own mills. The government has planned to have 2$\frac{1}{2}$ million cotton spindles within ten years. I hope some day we can set up training schools for various industries, and publishing houses which will help in the advancement of industry and education a great deal.

Inam Mohammed
Thadanis House
Reay Road
Karachi, Pakistan

¶ Meanwhile, there shouldn't be any trouble in disposing of that cotton.—*Eds.*

ANTI-UNION, BUT HE LABORS

Sirs:

I enjoy reading the TEXTILE BULLETIN and am now a subscriber. I was a textile worker for more than 25 years in Charlotte and was employed most of the time by Chadwick-Hoskins Co. The reason I am no longer a textile worker is my health. I suffer with arthritis and am not able to do a day's work.

I have had some experience with labor unions and I think the unions are more harmful than good. The unions create hatred between employer and employee. It is my opinion that the labor union officials and organizers are interested only in the large salaries they get from the unions, and not in the welfare of the working people they collect millions of dollars from every month. It is unconstitutional, un-American and unpatriotic to deny any man or woman the right to get a job or hold a job without joining a union. I am glad that most of the states have outlawed the closed shop, and am glad we have the Taft-Hartley Law and hope it will be made stronger. I shall vote for candidates for public office who are in favor of that law.

Parks A. Yandle
Printing and Advertising Novelties
1500 Harrill Street
Charlotte 6, N. C.

¶ It looks like the Taft-Hartley Law will be made stronger. See "Watching Washington" in this month's issue.—*Eds.*

FOR THE LACK OF A WRENCH . . .

Sirs:

I am writing in regard to a wrench. It seems that the one I want is unobtainable here in Greensboro. The wrench is a Billing open-end, S-type, 1$\frac{1}{8}$ by 1$\frac{1}{4}$ inches; number of it is 2044-85B. It is quite necessary on the Saco-Lowell picker. If you can tell me who makes the Billing or how I can obtain one it will be appreciated greatly.

Johnny Mobley
1505 Hardy Street
Greensboro, N. C.

¶ Sorry, one could not be located by the staff. Perhaps a fellow reader can help Mr. Mobley.—*Eds.*

MATERIALS HANDLING

Sirs:

We wish to publish a brief statement or comment by your editor in the next issue of the *EITA Messenger* on the importance of the unit load principle in efficient materials handling operations as you have observed them in the industry your publication represents. We are asking the editor of one leading publication in each of several fields for such comments. These we plan to carry in the June *EITA Messenger*, published by the Electric Industrial Truck Association.

As you know, materials handling is one

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RAYCO

for COTTON AND SYNTHETIC FIBERS

of the few remaining operations within which it is still possible for most industries to cut production costs drastically. Hence the keen attention being given these days to all phases of materials handling, throughout all industry. And the unit load principle is of course basic to practically any modern method of materials handling. The space you have devoted to materials handling is in itself an indication of the increased interest now prevalent among your readers in this "last frontier of industrial costs."

George S. Chappars
Account Executive
Public Relations Department
Ketchum, MacLeod & Grove, Inc.
411 Seventh Avenue
Pittsburgh 19, Pa.

¶ Right; see "Unit Loads—Their Handling, Shipment, Storage" in the Materials Handling Section of this issue. The requested statement has been prepared and mailed.—*Eds.*

DIRECTORY INFORMATION

Sirs:

I have a copy of your 1948 *Directory of Southern Textile Mills.* Please advise me where the LaFrance Industries or LaFrance, N. C., is located.

James T. Adair, Jr.
204 Woodlawn
Decatur, Ga.

¶ Subsidiaries of La France Industries (Philadelphia, Pa.) are listed in the directory as Pendleton Mfg. Co. at La France, S. C., and Blue Ridge Yarn Mills at Pendleton, S. C. There is no La France in North Carolina.—*Eds.*

Sirs:

We would like to get a list of all the firms that own three or more weaving mills, showing their general offices, purchasing departments and chief personnel identifications.

A. S. Gittlin
Vice-President
Gittlin Bag Co.
23-25 Rankin Street
Newark, N. J.

¶ This information can be compiled from *Clark's Directory of Southern Textile Mills.* We have no such list, and if we did the trust-busting boys in the Department of Justice might get their hands on it.—*Eds.*

Sirs:

Thank you for your courtesy in sending us *Clark's Directory of Southern Textile Mills,* 1948 Edition. It is invaluable to us in keeping our records up-to-date.

L. D. Reed, Director
Trade Analysis Division
E. I. du Pont de Nemours & Co.
Wilmington 98, Del.

SLASHING AND WEAVING

Sirs:

Recently one of our clients found an application in the textile industry for its rotary pumps—pumping starch to slashers. Is it possible for us to locate the names of the plants that use slashers, and the number of slashers in the various plants?

R. C. Breth
President
R. C. Breth, Inc.
Advertising
Green Bay, Wis.

¶ Slashing is a necessary warp preparation operation which precedes weaving. The ratio of slashers to looms on an hour-for-hour basis is approximately one to 400 on average weight, say 80-sley, goods. *Clark's Directory of Southern Textile Mills* lists the number of looms in each weaving mill; use the given ratio and you have your answer.—*Eds.*

THE BOOK DEPARTMENT

Sirs:

Please send me any publications which you have which deal with cloth room practices. . . .

James M. Terry
P. O. Box 5571
N. C. State College
Raleigh, N. C.

¶ Such information should be available from the following firms: Hermas Machine Co., Hawthorne, N. J.; Curtis & Marble Machine Co., Worcester, Mass.; and Parks & Woolson Machine Co., Springfield, Vt. —*Eds.*

Sirs:

I would appreciate it very much if you could supply me with the latest edition of *Practical Loom Fixing,* by Thomas Nelson.

J. D. Turcotte
Production Manager
Goodyear Cotton Co.
of Canada, Ltd.
St. Hyancinthe, Que.

Sirs:

In view of the fact that I am now employed with the government on a project in which experimental work on textile fabrics is being conducted, I am very much interested in obtaining a copy of *Practical Loom Fixing,* by Thomas Nelson.

Rolf Baehr
Textile Technologist
610 Academy Street
New York 34, N. Y.

Sirs:

Will you please forward to us a copy of your latest edition of *Clark's Weave Room Calculations?*

George M. Vaughan
President
Vaughan Textile Corp.
184 Pryor St., S. W.
Atlanta 3, Ga.

Sirs:

Kindly send me by mail the book entitled *Weave Room Calculations,* by W. A. G. Clark.

A. G. de Presno
c/o El Asturiano S. A.
Ave. 20 de Noviembre 42
Mexico City, D. F.
Mexico

¶ *Practical Loom Fixing* has gone forward; the supply of *Clark's Weave Room Calculations* is completely exhausted and it is expected to be late Summer or early Fall before the new edition is ready for distribution.—*Eds.*

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makes both soaps
and synthetic
detergents
more effective

—and that is only *one* of the ways in which it serves the textile industry. For the full story, send for our bulletin "Calgon Data for the Textile Chemist".

**T. M. Reg. U. S. Pat. Off.*

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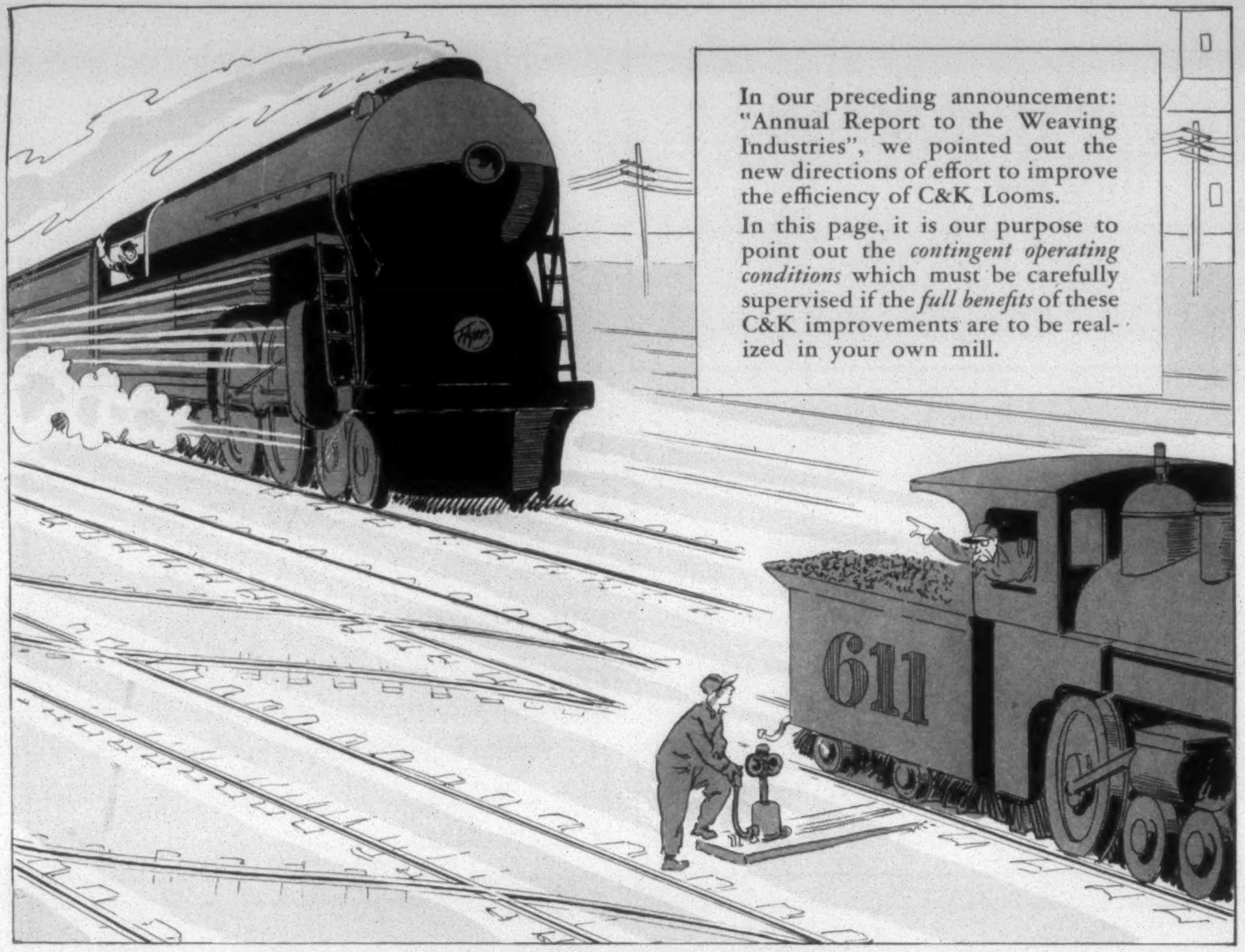
P. O. Box 1225 CHARLOTTE 1, N. C.


In our preceding announcement: "Annual Report to the Weaving Industries", we pointed out the new directions of effort to improve the efficiency of C&K Looms.

In this page, it is our purpose to point out the *contingent operating conditions* which must be carefully supervised if the *full benefits* of these C&K improvements are to be realized in your own mill.

"Sure, I could handle that New Job *just as well as this one here!"*

This would make a railroader's blood run cold—to assume, because a man has operated an old machine, that he should be able to take a *new* machine of the same general type and run it straight off . . . *without any knowledge of the new features.*

When common sense is so derailed, a wreck usually follows fast. And yet this situation is not as unusual as it ought to be, in U. S. weaving mills. Weavers on old looms are sometimes thrown in, "cold," to work on modern, new C&Ks. Then what happens? Usually a frantic phone call to "come see what's wrong with these—— looms!" So a C&K engineer goes. He sees. And here's an actual example of what he finds to be "wrong with those —— looms":

1: FILLING YARN: No bunches on bobbins. Long tails left on at time of quilling. No conditioning. All this caused run-outs, breaks, kinky filling, jerk-backs, snarls.

2: WARPS: Bad. Slack selvages. Crossed ends.

3: LOOMFIXERS: Did not understand importance of accurate setting of the latest C&K Looms.

4: STARTING UP: No check-up on looms before entering.

5: WEAVE-ROOM CONDITIONS: No 24-hour control of temperature and humidity.

6: ATTITUDE OF PERSONNEL: Workers antagonistic through lack of understanding of what new C&K Looms could do to increase their pay and make their work easier and more enjoyable.

CORRECTIVE MEASURES: All the above *6 faults in contingent conditions* corrected. A Production Committee formed to explain fully to the workers the advantages of the new C&K Looms. Instruction manuals issued. And now an active, personal interest on the part of top mill management makes continued success a certainty.

So why take a chance on running off the track, right at the start? Begin *now* to educate your workers and production personnel on how to get the top return from your mill's investment in new C&K Looms. Then you'll have a *clear track* to higher output, finer fabrics, lower costs.

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Established 1886

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Make Warm Friends

Beacon Manufacturing Co.
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Reading between the lines—

As selling agents for more than fifty mills we have achieved—

GREAT sales volume for our many products by reaching every principal—

TEXTILE market in the United States and more than fifty countries abroad by—

SELLING cotton and rayon cloth in the grey, finished cloth and fabricated household articles through our—

ORGANIZATION which is completely integrated to merchandise textiles in every form—for mill account only.

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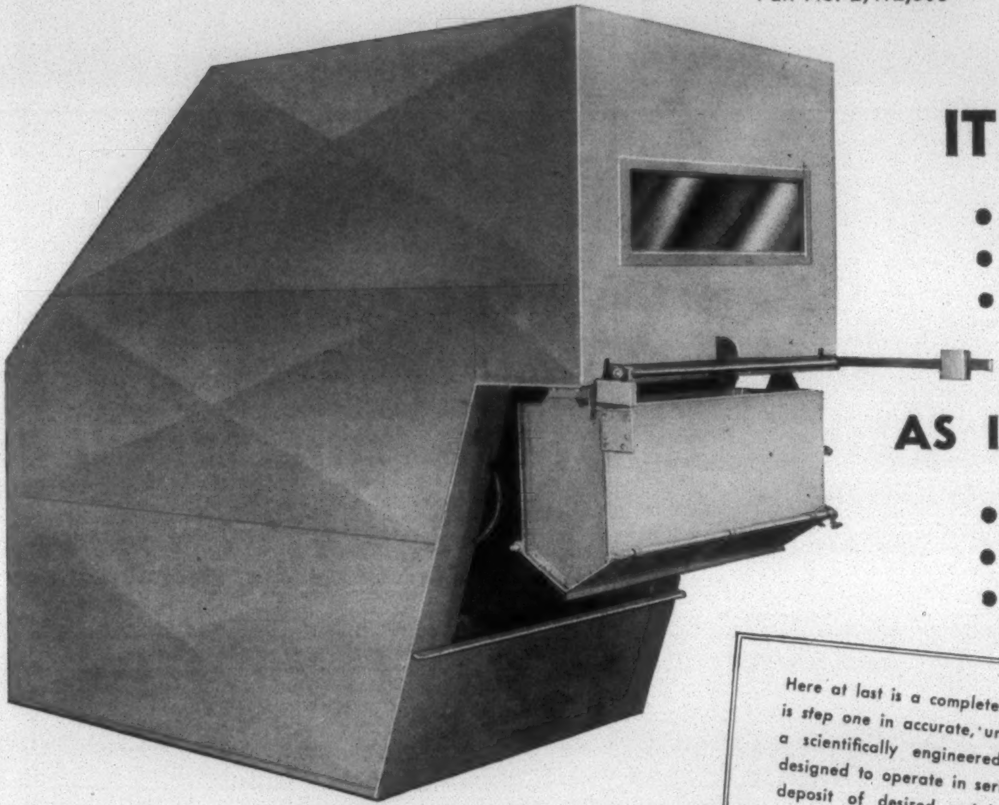

IT SAVES

- TIME
- LABOR
- MONEY

AS IT WEIGHS

- AUTOMATICALLY
- ACCURATELY
- DEPENDABLY

Here at last is a completely automatic feeder that is step one in accurate, uniform blending. Here is a scientifically engineered and constructed unit designed to operate in series for the simultaneous deposit of desired weights in any proportions.

Manufacturer
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It Takes the "Guess" out - Puts Profits In

1 Weighing mechanism delivers accurate amounts in any proportion. Will deliver 200 to 500 pounds per hour in accurate weights from 8 ounces to 32 ounces in 1 ounce increments. A viscous dampener is incorporated in the weighing system to insure constant, accurate operation.

2 Body of heavy gauge steel, welded construction. Weighing mechanism and components entirely of aluminum, suspended on spring steel straps.

3 Design incorporates automotive and aircraft principles of strength, rigidity and lightness applied for the first time to the textile machinery field.

4 Enclosed mechanism reduces fire hazard — promotes cleanliness and accident prevention.

5 Operation completely visible through Plexiglas windows to lighted interior.

6 Bearings are sealed, self-aligning, ball type requiring lubrication only twice a year.

7 Loading chute easily removable for cleaning.

8 1 HP motor for low operating costs.

9 Light weight and movable. Mounted on casters, if desired.

10 Delivered completely equipped and ready for operation. Installed by our own engineers.

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Blackman-Uhler Company, Inc.
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Making reliable cotton fabrics at the same old stand and under the same management since 1879.

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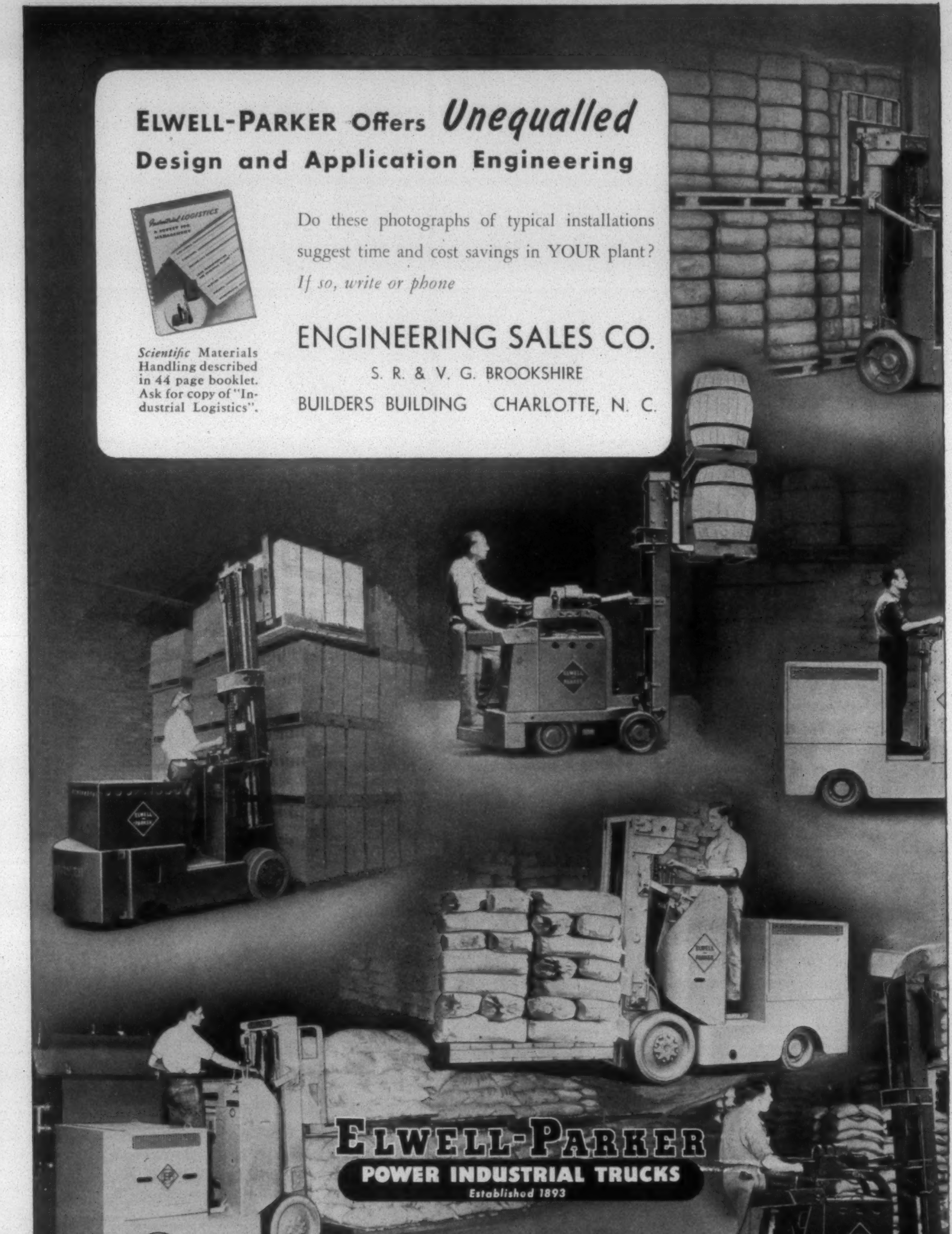

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Scientific Materials Handling described in 44 page booklet. Ask for copy of "Industrial Logistics".

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Who And Why?

TO the people of the South, including both labor and management, that was a rather disturbing if not sinister prediction made by George Baldanzi, executive vice-president of the Textile Workers Union of America, when he told its convention that there would be "bloodshed" and "people killed" before the Southern C. I. O. organization drive is ended.

As assistant to the director of the unionization campaign among Southern textile workers, Baldanzi presumably spoke with authority when he said: "We are faced with violence and religious bigotry in the South . . . For protection you use your own fists . . . I am telling you that before we get through with the Southern drive, based on what we are now facing, there is going to be bloodshed, there will be people killed in the South."

Who is going to start the "bloodshed" and who is going to be responsible for "people killed" in the campaign among the estimated 1,800,000 unorganized textile workers in the South? Baldanzi did not say. Will it be the union organizers, men and women among the 15,000 which the union claims to have added to its membership in the South in the last two years, or men and women among the great unorganized majority?

And why should there be bloodshed and people killed? Is it because only 15,000 of the 1,800,000 textile workers in the South have been enrolled in the C. I. O. union drive of the last two years? Mr. Baldanzi should have been more specific and stated who is going to resort to violence and bloodshed and killing, and why.—*Charlotte* (N. C.) *Observer.*

Trifling With The Future

THE time to cut production costs is now. The manufacturer who waits until he is in the middle of a buyer's market is going to be in a tough position.

More manufacturers already are in that uncomfortable position than one thinks. Bitter experience the past year has proved that the change from a seller's to a buyer's market can be disconcertingly rapid.

With today's labor rates what they are, individual companies are accomplishing their purpose by installing new machines, by handling materials and parts mechanically and automatically instead of by hand, by arranging their shops so that parts, subassemblies and assemblies flow freely and uninterruptedly down production lines.

The greatest productivity per man-hour is the ultimate objective, because that is the way to squeeze down unit costs. Prices can be lowered only if unit costs are minimized.

The competitive price "urge" will come in time. It may not arrive next week or next month, or even in six months. But it is a safe guess that it will be upon most industries by some time in 1949. The break in commodity markets will help to speed up the day.

How prepared are you for the coming of that day? Is your plant bulging with outmoded equipment or have you been astute enough to replace it with new, cost-reducing machinery?

What are you doing to cut down the expense of moving materials from one spot to another? If materials handling comprises 25 per cent of your costs now, why don't you take action to get it down to 20 per cent or 15 per cent?

Now is the time to equip yourself against the day when you must have low costs if you expect to stay in business against stiff competition. The management which chooses to wait until the crisis arrives is trifling dangerously with its future security. — *American Machinist.*

Who Gets Hurt?

CAN we answer this question by just saying "careless people?" No, we cannot, for there are many factors entering into the question. People do get hurt because of carelessness, which is a personal fault, but they also get hurt because of physical, mental, and mechanical inability, too.

Most accident victims are "mentally absent" at the time of the accident. There are many reasons for "mental absence." The emotions are very important diverters of attention, for fear, hate, jealousy, grief, impatience and even joy have their effect on the thinking processes, and can cause a person to be slow in reacting to danger.

We learn in an analysis of accidents that two per cent are the result of acts of God, 18 per cent are mechanical failures, and 80 per cent are human failures. We also learn that if you have a lost-time accident on the job, there is one chance in a hundred that you will be killed, one chance in 1,300 that you will be disabled for life, and one chance in 25 that you will be partially disabled for life.

Teaching safety is no easy job, for even after the teaching and telling again and again, for some reason or other the knowledge refuses to stick and has to be taught over and over. There can never be any let-up in the game of safety. We must play safe at all times from home to work and back again.

We must be constantly on the alert to work safely, play safely, and do everything in a safe manner. We must see that all machinery is properly guarded and that all hazards are promptly eliminated.

Above all, we must always be mentally alert and remember that almost all accidents can be prevented.

In the game of safety we are "our brother's keeper" as well as our own.—Sarah Van Sant of Graniteville (S. C.) Co., in *Textile Safety.*

Modernization Programs

IN spite of the great expansion and modernizing programs now under way in the Southern textile industry, the productive capacity for that industry in 1948 will still remain tight. The approximate 24 million spindles now in place in the nation's cotton mills are not expected to be increased by more than one or two million within the next few years. Most new spindles installed today are serving as replacement for worn-out machinery. The millions of dollars being poured into Southern mill improvements will create a highly-efficient industry without the danger of excessive overhead caused by too much machinery.—*Journal of Commerce* (N. Y.)

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superior
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softener
for all
fabrics

SAPAMINE WL
Reg. U. S. Pat. Off.

it combines the most in softness and fullness with the least in shade change and effect on light fastness.

IF one of these is your problem, investigate

SAPAMINE WL

1 Yarn softening — package or skein
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3 Static
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6 Softening chlorinated or shrinkproof wool yarn

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...thousands in use...and a machine for every use

Materials handling costs too high? Crowded for room? Space at a premium? You can use a Hyster fork type lift truck or Karry Krane with profit to hoist, move, tier heavy, bulky goods of all kinds. Your choice of 7 models with capacities ranging from the small 2,000 lb. fork truck to the 30,000 lb. straddle truck. All on pneumatic tires. All gasoline-powered. All manufactured to the highest engineering and performance standards. All sold and serviced by Hyster distributors — specialists in materials handling equipment. Do as every type of industry has done all over the world. *Save time, labor, money with a Hyster.* See your distributor. Write for literature.

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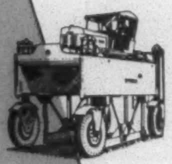
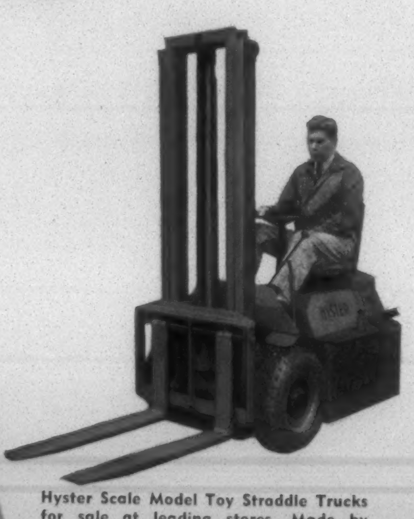
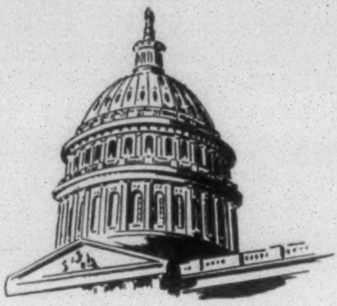


Hyster "20" *(below)* licks the storage handicaps of narrow aisles in warehouses, factories. Ideal for use in box cars, any close quarters. Only 37" wide. Hydraulic lift hoists 2,000 lbs. 9 feet. Other heights of lift and special fork truck tools available.



Hyster Scale Model Toy Straddle Trucks for sale at leading stores. Made by Druge Bros. Mfg. Co., Oakland, Calif.



WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Current strikes and industrial troubles are opening the way for new labor legislation, and a stronger labor law, in the next Congress. With the possible exception of dropping union shop elections, an attempt at new legislation in this session is not likely. In prospect are tighter restrictions on strikes or slow-downs, longer cooling off periods in disputes, and strengthened mediation and adjustment machinery.

Spade work in anticipation of revising the Taft-Hartley Law is under way. Starting May 24, hearings will be held during the Summer by the Joint Congressional Committee, and definite proposals will be ready when Congress reconvenes. Some provisions of the law may be stricken out, but with extension of its general scope of application.

Ominous clouds on the labor front are causing concern in top government circles. Administration spokesmen are making clear to Congressional leaders that rearmament, and underwriting recovery for Europe and the outside world, cannot be undertaken without dangerous repercussions to the home economy if strikes and labor troubles continue on the present scale.

Six proposals on which the Joint Congressional Committee will start work, looking to revision in the T.-H. Law, are: (1) prohibition of all forms of compulsory membership in unions, or elimination of an authorization election before a union shop contract; (2) transfer of certain powers of N. L. R. B. to federal courts for enforcement, or creating new labor courts for this purpose; (3) application of anti-trust laws to labor monopolies; (4) adequate government control of welfare funds; (5) outlawing wage agreements outside of the T.-H. Law; and (6) extending the scope and authority of mediation.

Union shop elections will be discontinued if Congress acts before adjourning on a bill being pushed by Senator Ives (R., N. Y.) and Representative Landis (R., Ind.) Such action seems likely. Under this bill, empoyers would sign union shop agreements without waiting for an election conducted by N. L. R. B., if they wish to do so. Closed shop contracts would continue to be outlawed.

A major surgical operation on union welfare funds impends when Congress swings into action. Employers may be relieved of bargaining on pension and welfare issues, and strikes or work stoppages to enforce acceptance of them made subject to heavy federal penalties.

Trend and tenor of new labor legislation hinges in a large measure on outcomes in this year's election. So far in primary contests the unions are credited with having defeated only two legislators up for re-election on the specific issue of having voted for the T.-H. Law, or to over-ride the President's veto of it.

Shadow of another coal strike is pushing to the front in Congress the issue of banning industry-wide bargaining in every form, including railroads and coal mines, and repealing immunity to unions from anti-trust laws. This action would bring the Department of Justice directly into the field of industrial relations.

Mr. Truman seems determined to "go down the line" for renomination. Party leaders concede he will get it, but not even the most optimistic think he will win. The most Democratic leaders hope for is to regain control of one or both houses in Congress, and get in position to win in 1950 and 1952.

Southern Democrats have hit where it hurts most in withholding Jackson Day dinner donations from the party war chest. The chest is empty as convention time draws near. Contributions from other sources have been nil since the Southern "rebellion" started.

This session of Congress will come speedily to a close. Many bills are pending on the legislative calendar, but only "must" measures have a chance. Majority leaders want to minimize frictions being engendered by various presidential candidacies.

Hostile criticism of the Supreme Court is reaching a new high as a result of the decision nullifying restrictions in property conveyances. The court is charged with irresponsibility, playing politics and indulging in legislation. A show-down impends when the House bill is called up to set aside the court's decision taking oil-rich tidelands from the states.

Selective service will be revived in a modified way before Congress adjourns. New military draft is expected to start with 19-year-olds, and go to age 24 or 25. Term of service is expected to be two years. College students will get some deferment, but not much, and only on an individual basis.

CROWN COTTON MILLS
DALTON, GEORGIA

Army Duck, Drills
and Sheetings

ATLANTIC COTTON MILLS
MACON, GEORGIA

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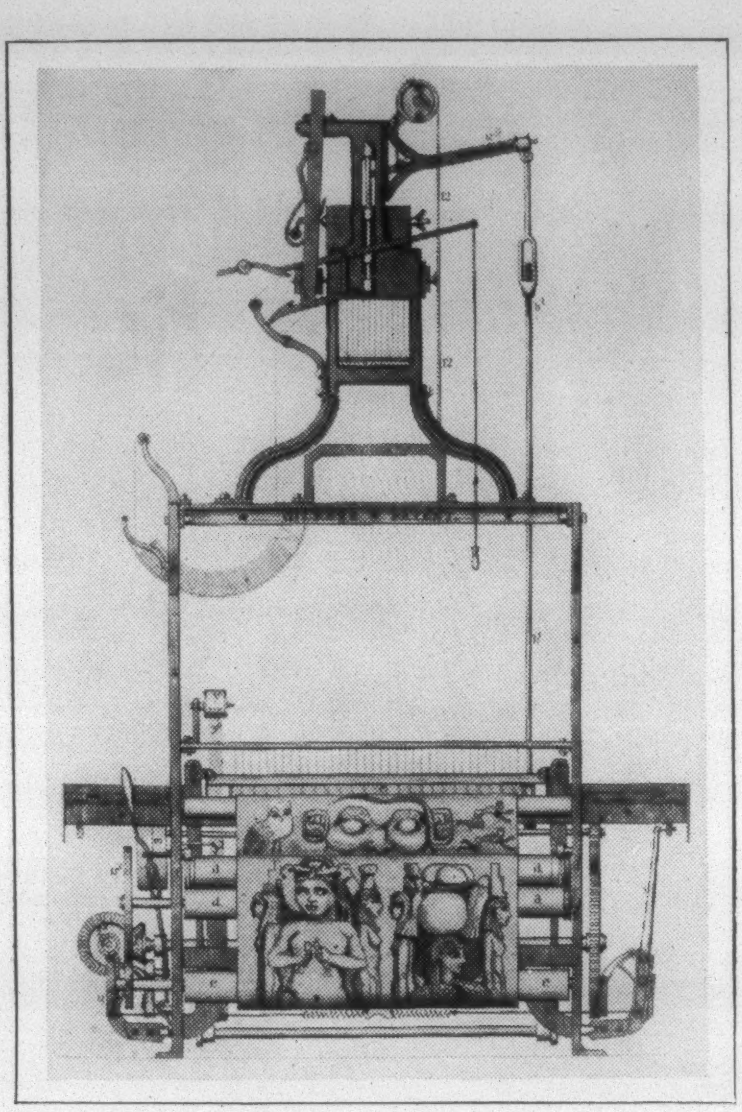
Carpet and Insulating Yarns



A HUNDRED YEARS AGO...

this was the latest thing in looms, but just as industry has modernized its mechanical equipment, it has also streamlined its financial and credit methods. Today, the efficient manufacturer leaves his financial and credit problems to a specialist... the factor. We, as factors, have not only provided cash, service and credit protection to manufacturers in good times and bad, but time and again we have combined our capital with the ingenuity and foresight of our clients to improve their ability to stay in business... to profit and compete.

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Boy Scouts from an Avondale community.
Painted from life by Douglass Crockwell—Number 13 of a Series.

Self-reliance . . . can it be woven of fabric?

Was there ever a greater moment in a boy's life?

He sets forth on adventure.

And he ends up a better, self-reliant citizen!

Seven thousand of us here at Avondale Mills produce good cotton fabrics for America . . . by the millions of yards every year.

But we also want to do everything within our power to help produce more self-reliant citizens for America.

That is why we give every boy eligible to be a Boy Scout that opportunity.

That is why we open three of our own Avondale vacation camps to the Boy Scouts. (One is in Florida, on the Gulf Coast. One is in the mountains, at a lake. One is on the Coosa River, here in Alabama.)

That is why, too, our President is also Vice-President of the Choccolocco Scout Council, and why nearly fifty of us at Avondale Mills are Scout Masters.

This making of better citizens seems to us a natural part of our "Partnership-with-people". From this working "partnership" come many benefits. Both for us and for you.

For us: *Incomes as high as any in the nation's textile industry . . . Production rates as high as any and unit labor costs constantly decreasing . . .* And for you: *Better cotton yarns and fabrics at prices to fit your budgets!*

Thus we hope to weave better fabrics, and better self-reliant young citizens . . . for America!

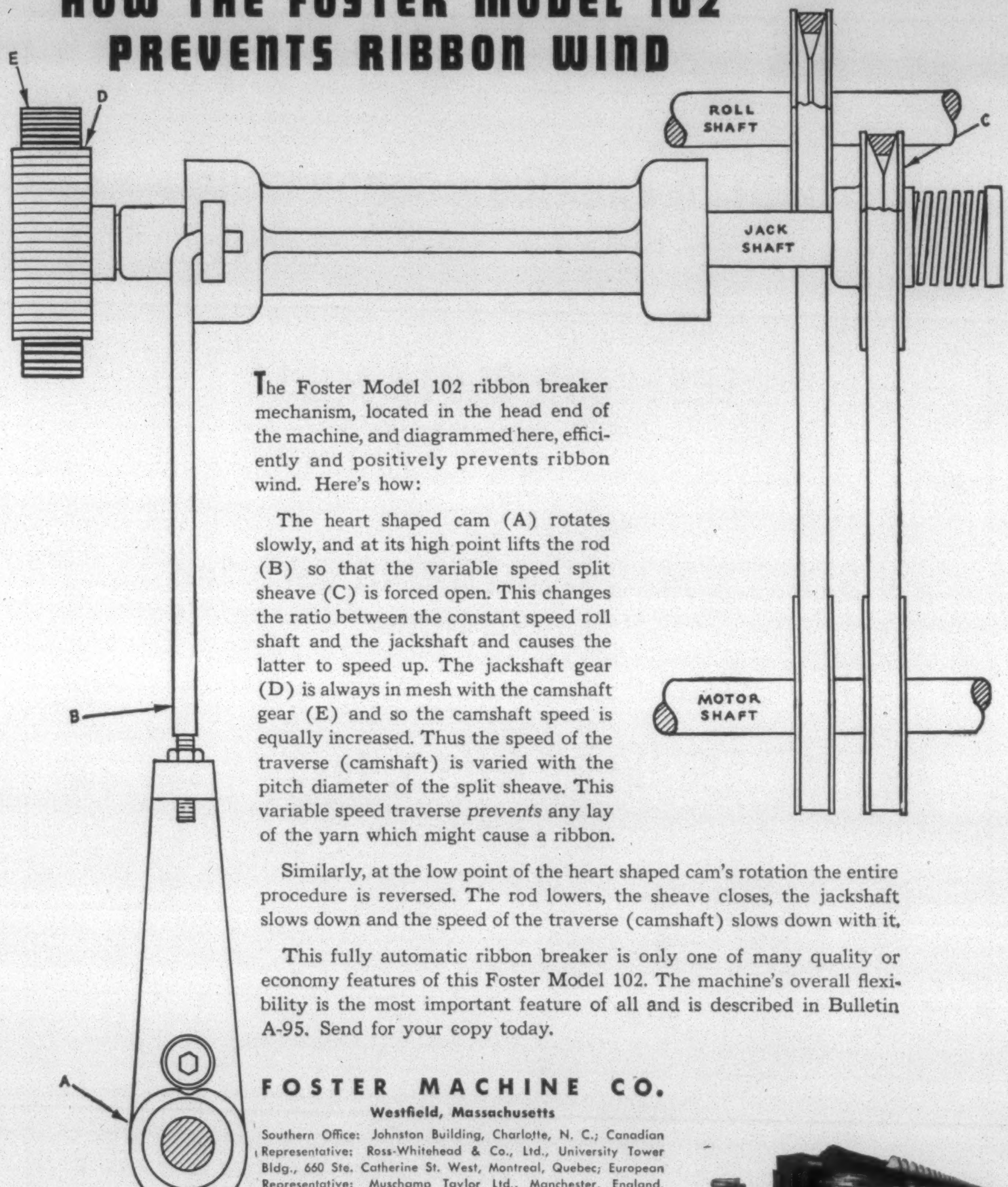
Next month we would like to make a statement to you on Independence.

Avondale
MILLS OF ALABAMA
GENERAL OFFICES: SYLACAUGA, ALABAMA
FOUNDED IN 1897 BY GOVERNOR B. B. COMER

AVONDALE SPINS THE YARN AND WEAVES THE FABRICS THAT GO INTO THE HOME FOR EVERY MEMBER OF YOUR FAMILY

Above is reproduced from advertisement appearing originally in *The Saturday Evening Post,* issue of March 20, 1948.

HOW THE FOSTER MODEL 102 PREVENTS RIBBON WIND



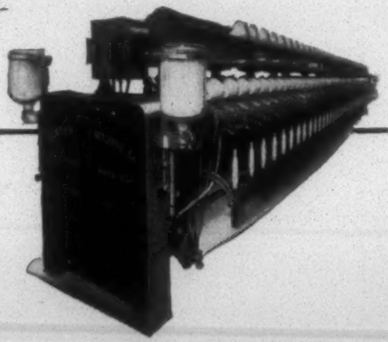
The Foster Model 102 ribbon breaker mechanism, located in the head end of the machine, and diagrammed here, efficiently and positively prevents ribbon wind. Here's how:

The heart shaped cam (A) rotates slowly, and at its high point lifts the rod (B) so that the variable speed split sheave (C) is forced open. This changes the ratio between the constant speed roll shaft and the jackshaft and causes the latter to speed up. The jackshaft gear (D) is always in mesh with the camshaft gear (E) and so the camshaft speed is equally increased. Thus the speed of the traverse (camshaft) is varied with the pitch diameter of the split sheave. This variable speed traverse *prevents* any lay of the yarn which might cause a ribbon.

Similarly, at the low point of the heart shaped cam's rotation the entire procedure is reversed. The rod lowers, the sheave closes, the jackshaft slows down and the speed of the traverse (camshaft) slows down with it.

This fully automatic ribbon breaker is only one of many quality or economy features of this Foster Model 102. The machine's overall flexibility is the most important feature of all and is described in Bulletin A-95. Send for your copy today.

FOSTER MACHINE CO.
Westfield, Massachusetts
Southern Office: Johnston Building, Charlotte, N. C.; Canadian Representative: Ross-Whitehead & Co., Ltd., University Tower Bldg., 660 Ste. Catherine St. West, Montreal, Quebec; European Representative: Muschamp Taylor Ltd., Manchester, England.



FOSTER MODEL 102

The Flexible Winder

FOR COTTON, MERCERIZED, WOOL, WORSTED, MERINO, SPUN SILK OR SPUN RAYON YARNS

CARTER FABRICS CORPORATION

GREENSBORO, NORTH CAROLINA • SOUTH BOSTON, VIRGINIA

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SLATER MANUFACTURING CO., Inc.

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Executive Offices — Jefferson Standard Bldg., Greensboro, N. C.

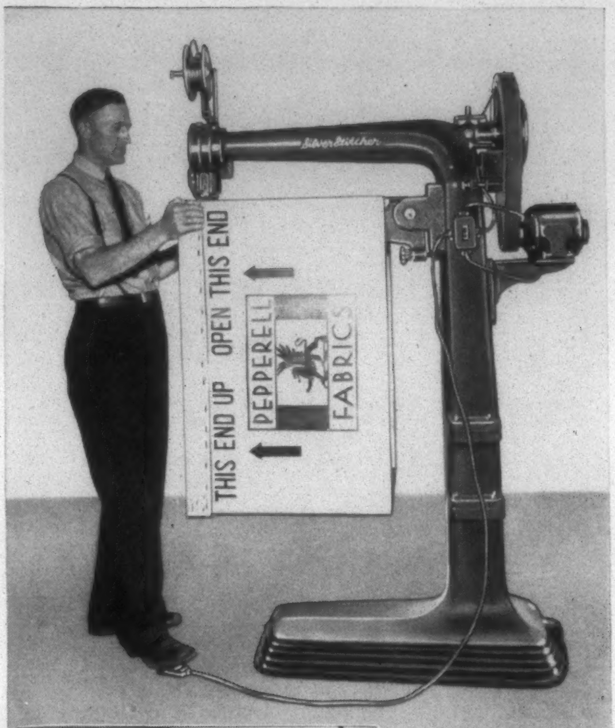
Subsidiaries of J. P. STEVENS & CO., Inc.

New York City

Manufacturers of Yarns and Fabrics of Cotton, Wool and Synthetic Fibers

4-Way Saving

Read how Acme Silverstitcher methods give you savings in time, material, labor, shipping costs, storage space



▲ Textile carton being assembled with Acme Silverstitch . . . quickly, economically, securely.

◄ Fiberboard box of textiles ready for shipment, firmly stitched with Acme Silverstitch and bound with Acme Steelstrap. Merchandise will arrive safely at its destination without damage or loss.

1 **Save on time.** Acme Silverstitchers prepare fiberboard boxes for shipment in record time. Boxes can move on a production-line basis, built as needed.

2 **Save on material.** Acme Silverstitch wire used with fiber boxes helps eliminate large amounts of other, more costly boxing materials.

3 **Save on labor.** Here's an actual case! In one customer's plant, one man, using Acme methods, prepares 5 times as many boxes per hour as he was able to assemble by other methods.

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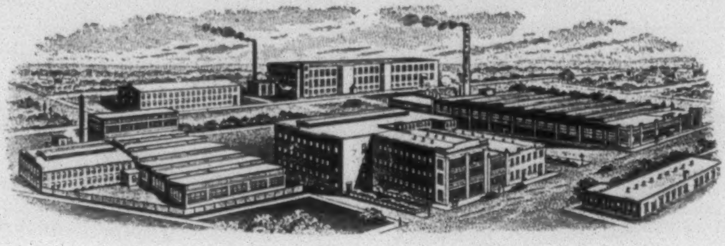

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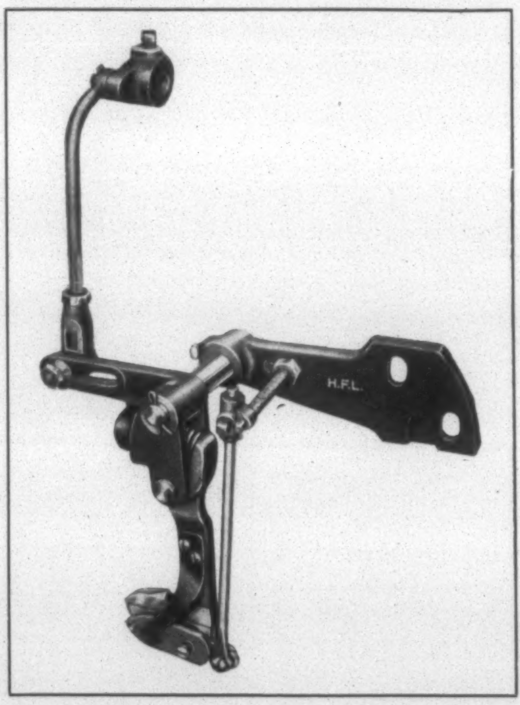

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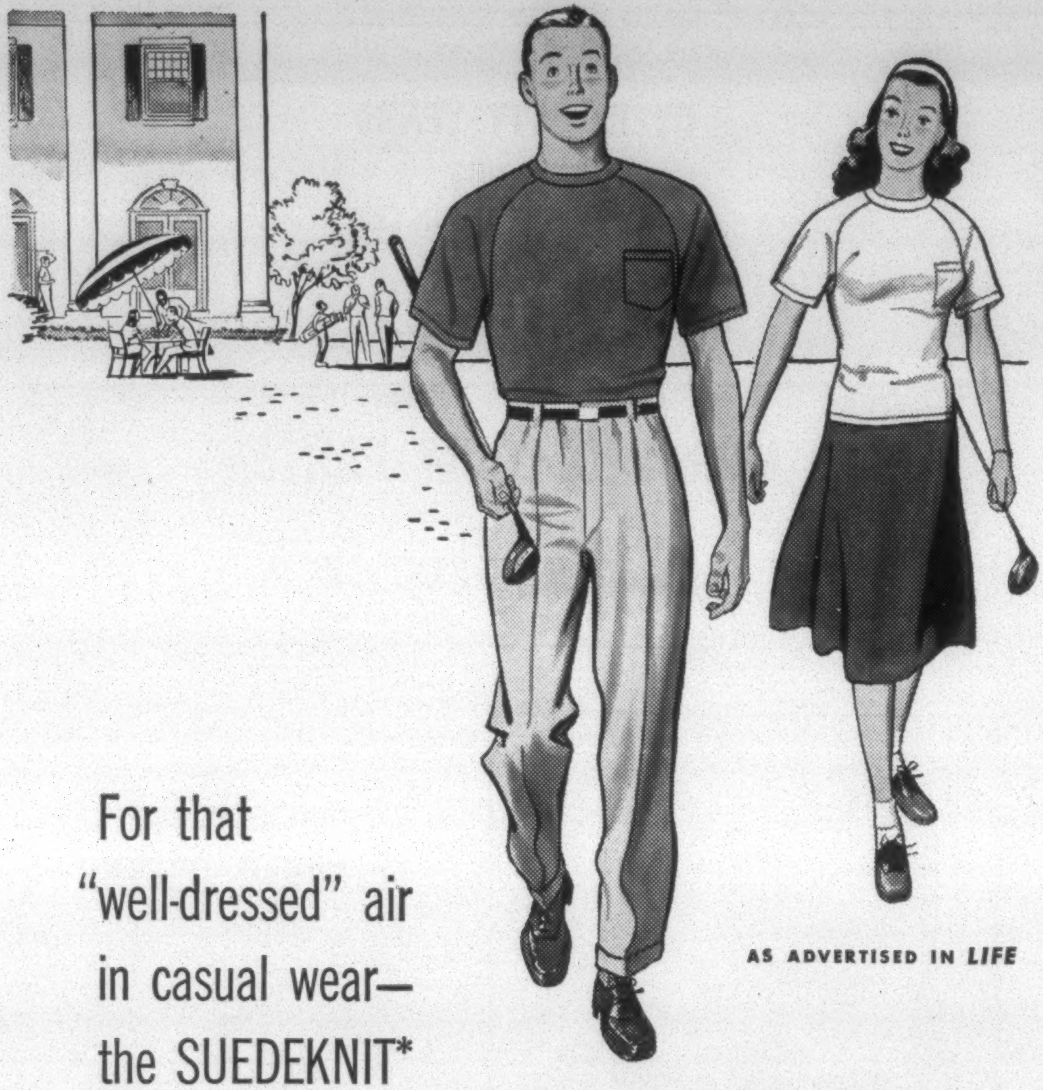

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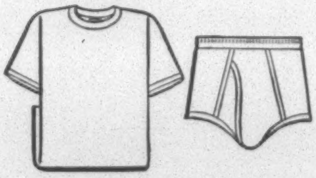

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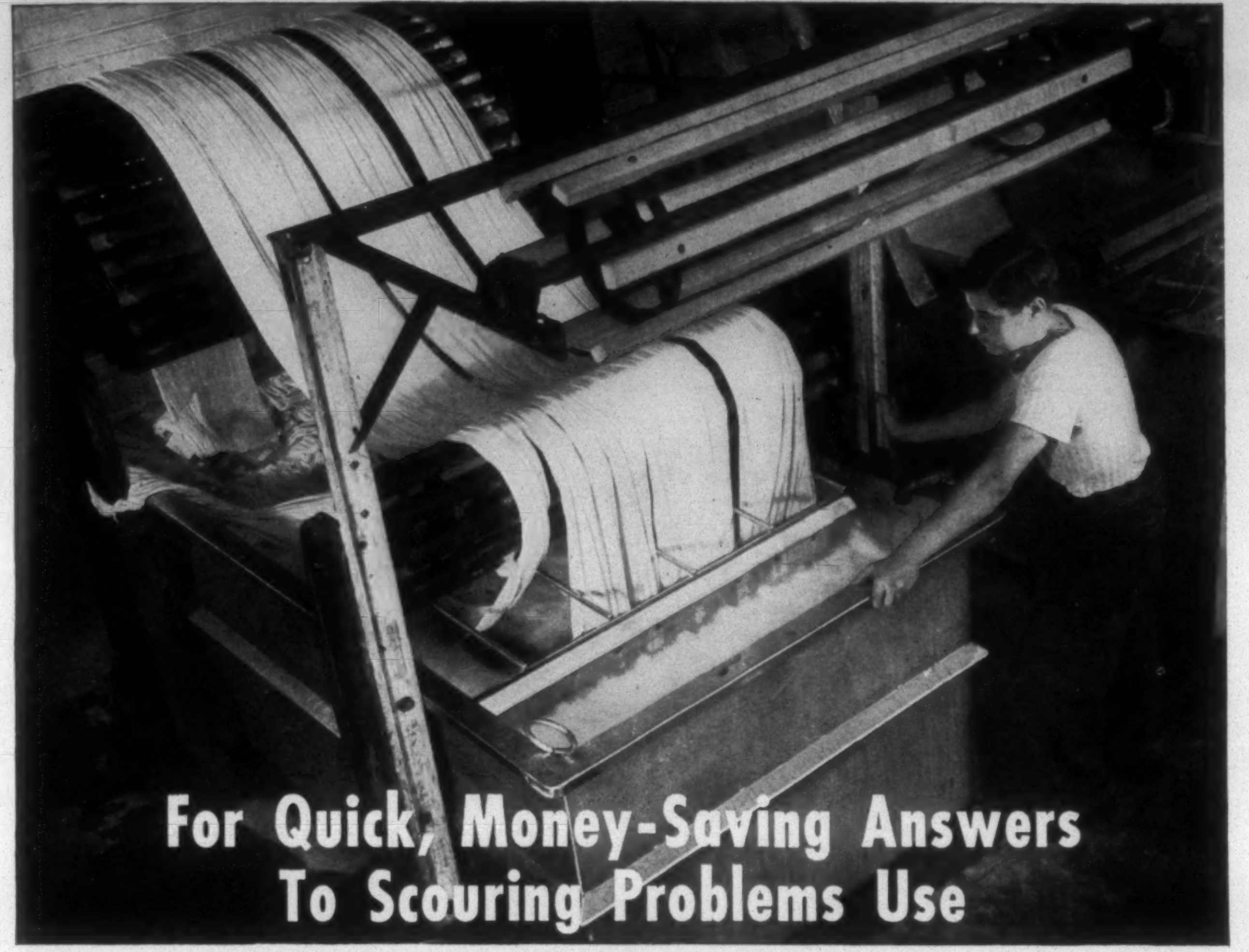

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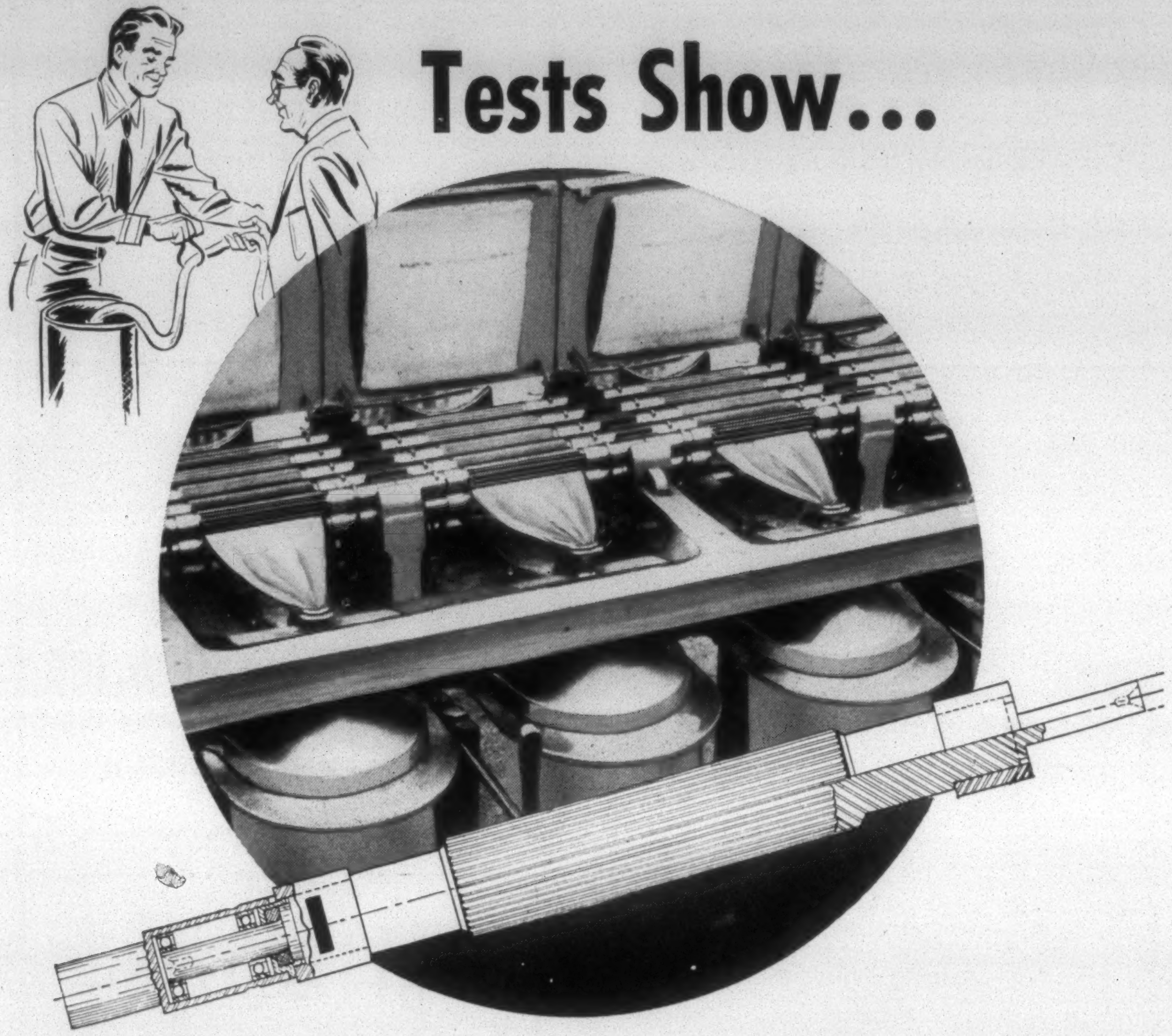

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as shown in McCall
Magazine's traveling school
pattern show.

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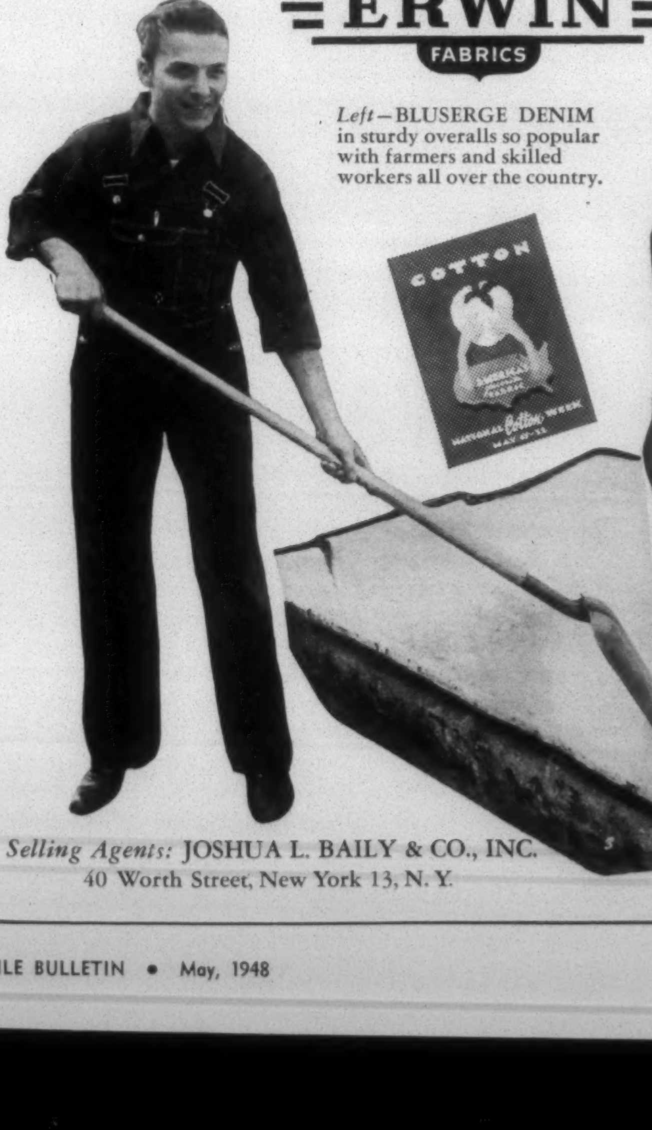

Left—BLUSERGE DENIM
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The Anti-Truman Conference

The editor of this publication attended the Democratic Revolt Conference held at Jackson, Miss., in February and regrets that another engagement made it impossible for him to attend the larger conference held at the same place on May 10.

President Truman, born and raised in Missouri and therefore entirely familiar with the Negro problem and knowing what the so-called Civil Rights Program will mean to the white people of the South, has, in effect, expressed a willingness to sell the South "down the river" in order to obtain the Negro vote in several Northern states.

President Truman is attempting to force the Southern people to eliminate all segregation laws and to permit Negroes to occupy the same hotels, restaurants and schools as white people and to force factories and offices to employ Negroes side by side with whites.

[illegible]

He favors forcing white girls, in our cotton mills, to occupy the same rest rooms with Negro girls and to work under Negro overseers and second hands.

Gov. Strom Thurmond of South Carolina well said in his keynote speech at the conference at Jackson, Miss., on May 10:

> These big city machine bosses and their puppets in office . . . should once and for all realize that on the question of social intermingling of the races our people draw the line.
>
> All the laws of Washington and all the bayonets of the Army cannot force the Negro into their homes, their schools, their churches, and their places of recreation and amusement.

We fully agree with Governor Thurmond and believe that much blood will flow before the people of the South accept social equality with Negroes.

A large percentage of the white people of the South, including the pure-blooded Anglo-Saxons who constitute the bulk of mill employees of the South, had rather die than live under the conditions which President Truman is attempting to force upon them.

yes!

If the Democratic convention nominates Truman he will receive only a small portion of the electoral votes of the Southern states.

The conference at Jackson, Miss., on May 10 adopted the following resolution:

> If the program is adopted at the Philadelphia convention, inconsistent with the principles of the states' rights Democrats, then a conference of Democrats of the states in accord with states' rights principles . . . is called to meet in Birmingham at 10 a. m. July 17.

A formal pledge, signed by all of Alabama's 11 Democratic candidates for the electoral college, and filed with the State Supreme Court, definitely rules out Truman as a Presidential candidate from that important state of democracy's one-time solid South. It is almost certain to be followed by similar action in Arkansas, Mississippi and South Carolina and action in some other states will be equally effective.

Solemn oath signed by Alabama's candidates for Democratic electors and later certified as legally binding by the State Supreme Court is:

> We will not cast our electoral votes for Harry S. Truman for President. If the Philadelphia convention adopts a program hostile to the fundamental principles on which our civilization is based, or nominates a candidate who advocates such hostile principles, we will not cast our votes for the nominee of that convention, but will cast our electoral votes for some other Democrat who understands and sympathizes with the peculiar racial problems of the South. * * * if, under the leadership of Truman, the national party attempts to nullify the Constitution of our state (prescribing segregation) and to crucify the South, the Democratic party of Alabama owes it no allegiance. * * * we can and will take back our influence in the Democratic Party of which we were wrongfully deprived.

The importance of this Alabama gesture of defiance is that it is mathematically impossible for Harry S. Truman of Missouri to be elected President of the United States.

During the terrible Reconstruction Days, which followed the Civil War and when the people of the South, overwhelmed with poverty and distress, were fighting for their very lives and when Negroes who raped white women went unpunished, there were a few Southern white men who were so low down that, for such favors as they could obtain, joined the carpetbaggers and helped carry on the reign of terror.

Today there are a few white men such as Ellis Arnall of Georgia and Jonathan Daniels of North Carolina, who appear to be willing to join Harry Truman in selling the South "down the river" and into social equality with Negroes, in the hope that they may obtain political favors and political positions.

In Reconstruction Days most of the best Negroes in the South took their positions beside the white people and not only fought against the carpetbaggers and the scalawags, but showed utter contempt for what they were pleased to designate as the "poor white trash."

Nowhere is there a greater measure of contempt than that which self respecting Negroes feel for those white people who seek to curry favor with them by advocating the elimination of racial lines.

Today the best Negroes, in fact, most Negroes in the South, have no desire to see segregation laws eliminated.

They rightfully desire better schools and churches and better working and living conditions for their race but they prefer to associate with their own people and object to efforts to force a mingling of the races.

Behind these efforts to eliminate the segregation laws of the South are Northern politicians and a group of people who feel that they were put on earth for the single purpose of regulating the lives and conduct of the people of the South.

The people of the North are, as a whole, entirely willing to allow the people of the South to retain the rights given them, under the Constitution and the Bill of Rights, to make regulations for the conduct of people within their area.

The immediate problem before the people of the Southern states is to see that no person be chosen as a delegate to a state Democratic convention or the national Democratic convention who is not a staunch advocate of States Rights or who will sell himself to Harry Truman in the hopes of obtaining political power or position.

Unless the cotton mill employees of the South are willing for their daughters to work side by side with Negro girls and to share rest rooms with them and to be forced to work under Negro overseers and second hands they should take the lead in seeing that no modern "carpetbagger" or "scalawag" has a vote in a Democratic convention.

New Principle Of Law

In pronouncing his judgment upon John L. Lewis, Judge Goldsborough made certain remarks which may be considered as a new principle of law, because no court had ever before been called upon to rule in a case in which "a nod, or wink, or code" had been utilized in order that a union might avoid its responsibility.

The principle which Judge Goldsborough enunciated was this: *That so long as a union is functioning as a union, it must be held responsible for the mass action of its members.*

Judge Goldsborough said "the court has no means of knowing whether higher courts will adopt the principle or not, but the court has no doubt about its soundness—not any."

He then went on to elaborate his thought in words which merit close scrutiny and full understanding:

"You can't preserve a union any other way. And the unions are the only thing which labor has to give it comparable bargaining power with capital. It is the only thing which the employee has to give him equal or comparable bargaining power with his employer.

"So, the rule of law which I have announced is the only rule which will preserve the unions, because if the plan is adopted throughout the country of trying to use a wink, a nod, a code instead of the word 'strike,' and if that sort of maneuver is recognized by the courts as valid, then you will have among the unions lawlessness, chaos and ultimate anarchy. And then the unions will have to be socialized. In other words they will have to be destroyed."

Judge Goldsborough's "new principle" has the merit of foundation on one of the eternal verities of our civilization: *that for every right and privilege there is a corresponding responsibility.*

To it might be added the verity that what it is criminal for an individual to do also is criminal for men acting in collusion or concert to do.

Judge Goldsborough's remarks, in deciding that John L. Lewis was guilty, were far more significant than the fine which he levied upon Lewis and the United Mine Workers.

Railway Brotherhoods

For many years publicity bureaus have pictured the Brotherhood of Locomotive Engineers, the Brotherhood of Firemen and Engineers and the Brotherhood of Locomotive Engineers as labor unions par excellence and as patriotic organizations which were always willing to do the right thing.

Judging by their recent actions and their willingness to bring distress to the people of the United States, we cannot see that Alvanley Johnston, A. J. Glover and D. B. Robertson are less ruthless or any better than John L. Lewis.

If the pay of railroad men was low, there would be some excuse for their actions, but not only is the pay high but they have forced upon the railroads rules and regulations which often require payment for services which are not rendered.

A few years ago a special football train ran from Charlotte to Chapel Hill, N. C. We were told that at Salisbury, N. C., or 44 miles from Charlotte, the starting crew had completed its run and had to be paid for eight hours. At Durham, N. C., about 100 miles further, another crew completed its run and rules required payment for eight hours. The run from Durham to Chapel Hill was 12 miles but the crew drew pay for eight hours. The process was reversed upon the return trip.

One train crew could have taken the train from Charlotte to Chapel Hill and back but altogether six crews had to be paid.

The practice of feather-bedding which has been condemned in other unions seems to be condoned when practiced by railway unions.

We can see no legitimate reason why railway unions should not be subject to the provisions of the Taft-Hartley Law.

TEXTILE INDUSTRY SCHEDULE

May 27-29—**COTTON MANUFACTURERS ASSOCIATION OF SOUTH CAROLINA**, Grove Park Inn, Asheville, N. C.

May 27-29—Annual convention, **TUFTED TEXTILE MANUFACTURERS ASSOCIATION**, Sheraton-Plaza Hotel, Daytona Beach, Fla.

June 7-12—**INTERNATIONAL TEXTILE EXPOSITION**, Grand Central Palace, New York City.

June 18—**PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Ocean Forest Hotel, Myrtle Beach, S. C.

July 22-24—Ninth annual **COTTON RESEARCH CONGRESS**, Dallas, Tex.

July 24—**SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Atlanta, Ga.

Sept. 25—**SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Columbus, Ga.

Sept. 27-Oct. 2—Third **NATIONAL PLASTICS EXPOSITION**, Grand Central Palace, New York, N. Y.

Oct. 4-9—15th **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 14-15—Annual meeting, **NORTH CAROLINA COTTON MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 21-23—Annual convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Sheraton-Bon Air Hotel, Augusta, Ga.

Nov. 30-Dec. 1—Annual meeting, **NATIONAL COTTON COUNCIL**, Los Angeles, Cal.

Dec. 4—**SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Atlanta, Ga.

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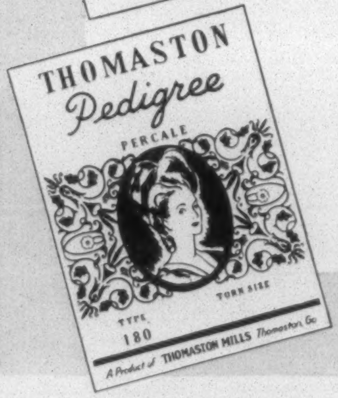

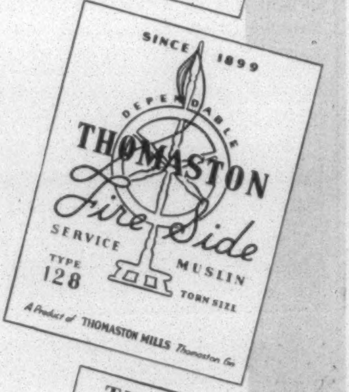

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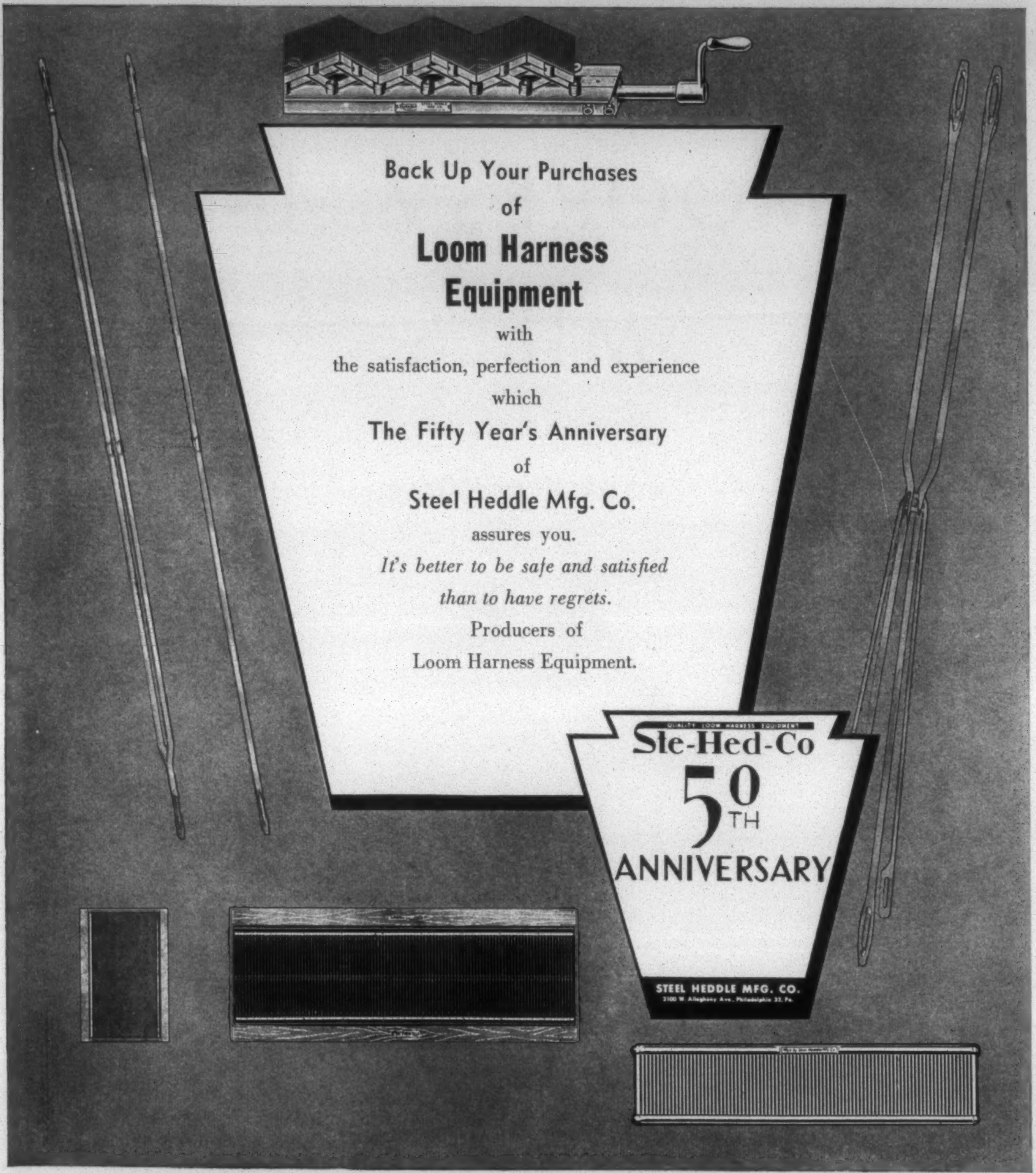
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textile bulletin

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The American Cotton Manufacturers Association 52nd Annual Meeting

THE place of the United States in the world textile picture was given very thorough consideration during the 52nd annual meeting of the American Cotton Manufacturers Association at New Orleans, La., last month. The nearly 800 mill executives and industry affiliates who attended the three-day convention were urged to get the American textile machine in such running condition that it can maintain its present international leadership. The U. S. textile industry must have the ability to produce saleable quality goods in desired quantity, the delegates were told. (Eight of the addresses delivered at New Orleans are published on following pages.)

The newly-elected officers of the association are Harvey W. Moore of Concord, N. C., chairman of the board; Ellison S. McKissick of Easley, S. C., first vice-president; and George P. Swift of Columbus, Ga., second vice-president. Continuing in office are William P. Jacobs of Charlotte, president and treasurer, and F. Sadler Love of Charlotte, secretary. The executive committee now consists of Mr. Moore (chairman), Mr. McKissick, Mr. Swift, Fuller E. Callaway, Jr., of LaGrange, Ga., Charles A. Cannon of Kannapolis, N. C., Walter S. Montgomery of Spartanburg, S. C., and J. Craig Smith of Sylacauga, Ala.; alternates include Charles C. Hertwig of Macon, Ga., R. E. Henry of Greenville, S. C., Joe L. Lanier of West Point, Ga., and A. K. Winget of Albemarle, N. C. Named to three-year terms on the board of government were W. H. Beattie of Greenville, Julian Hightower of Thomaston, Ga., and W. H. Ruffin of Durham, N. C. They replace S. M. Beattie of Greenville, Norman Elsas of Atlanta, Ga., and A. G. Myers of Gastonia, N. C. Ernest Rees of Fayetteville, Tenn., and Elliott W. Springs of Lancaster, S. C., were re-elected to the board.

Convention business got under way at the Roosevelt Hotel Thursday afternoon, April 22, following a welcome by DeLesseps S. Morrison, mayor of New Orleans; Mr. Moore, then first vice-president of the A. C. M. A., presided. Mr. Callaway, who was ending his year as chairman of the board, delivered his report prior to presentation of papers by two guest speakers—"Cotton and Its Future," by Ransom E. Aldrich, president of the Mississippi Farm Bureau Federation and chairman of the National Cotton Council's production and marketing committee, and "The Place of Synthetic Fibers in the Textile Field," by Stanley B. Hunt, president of the Textile Economics Bureau, Inc. Members of the New Orleans Cotton Exchange were hosts to the convention late that afternoon on the exchange floor.

Mr. McKissick, then second vice-president, presided at the second business session Friday morning. Addresses presented were "The British Textile Situation," by Claudius T. Murchison, president of the Cotton-Textile Institute, Inc.; "Research and Its Importance to the Textile Industry," by Ward Delaney, president of the Institute of Textile Technology; and "Some Present Economic Considerations," by A. L. M. Wiggins, Undersecretary of the Treasury. Prior to the annual association banquet that night Mr. and Mrs. Callaway entertained at another social hour.

The final session Saturday morning was presided over by Mr. Callaway. A "Report on the Japanese Textile Mission" from Donald Comer of Avondale Mills was read by his brother, Hugh M. Comer. Dr. Jacobs then delivered his annual report, entitled this year "Trends in the Future." After reports from the resolutions and nominations committees came the election of officers and presentation to the retiring chairman of a watch charm similar to one awarded to Fuller E. Callaway, Sr., upon his retirement as the organization's president. The presentation was made by W. N. Banks of Grantville, Ga., a past A. C. M. A. president.

A resolution was adopted expressing the associaton's official opposition to any increase in taxation by the Federal Government, to any excess profits tax law, to any renegotiation law, and to any federal control of the prices of farm or factory products. Another resolution urged the Department of State and Congress to give intensive and thoughtful consideration to the consequences of the proposed International Trade Organization.

The industry-wide public relations program was discussed by several leading mill executives during the final session. Tribute was paid to the work performed by the Textile Mills Information Service staff and the efforts of G. Ellsworth Huggins, chairman of the committee sponsoring this activity.

Fuller E. Callaway, Jr.

ALMOST exactly 30 years ago, on May 1, 1918, the annual meeting of the American Cotton Manufacturers Association was held at the Biltmore Hotel in New York City. This particular meeting—the one held 30 years ago—interests me at this time for several reasons. In the first place, it interests me for the sentimental reason that my father was completing his year as chief executive officer of this association then, as I am now. Second, it interests me because the problems of the industry at that time, 30 years ago mind you, were in many respects almost identical to the problems which face our industry today.

The titles of many of the papers presented at that meeting of 30 years ago would be entirely appropriate and timely for our meeting here in New Orleans this week. For example, some of the papers presented 30 years ago were as follows: "America's Place in World Trade," "Our Fight for Foreign Trade after the War," "Providing Credit Facilities for Our Foreign Trade," "Our Stake in Latin America," and "The Metric System in Export Trade."

One entire morning session was given over to these subjects which, I think, emphatically shows that there were those who foresaw the horrible shadow of the lean years which lay ahead for our industry unless the markets for our goods were expanded to bring a balance between shrunken peacetime consumption and our greatly expanded wartime productive machine which during the war had learned to operate a double shift and make two yards of cloth grow where only one grew before.

Almost exactly 16 years ago, on May 20, 1932, the annual meeting of the association was held at the Biltmore Hotel in Atlanta. This meeting also interests me for the sentimental reason that my brother Cason was completing his term as chief executive officer of the association; and, in addition, it interests me because it was held in the year 1932 which was just about, if not exactly, the bottom of our great economic depression in this country. At the meeting in 1932 the theme song of the convention was the necessity to increase domestic consumption of American cotton, if our industry was to survive, with emphasis on new uses for cotton, textile merchandising, and competition in the domestic market with jute and other imported fibers and fabrics.

That our industry taken as a whole during the 1920s and early 1930s had failed to fully meet the challenge which was theirs is borne out by statistics. Our mills in the United States in spite of the pleadings and inspiration of our leaders, instead of successfully solving the problem of world distribution, were content to fight among themselves, like a pack of hungry wolves, for their small share of the decreased volume of domestic consumption, with the result that competition during the years after World War I forced 12,500,000 of the spindles originally in place onto the junk pile by 1939. Think of it, 34½ per cent of our spindles, our productive machine, junked in less than 20 years!

At the first business session, left to right: Ransom E. Aldrich, President Charles W. Wells of the New Orleans Cotton Exchange, Stanley B. Hunt (speaking), Harvey W. Moore (top of head showing), and Hearne Swink, president of the North Carolina Cotton Manufacturers Association.

This fact in itself would be a sad enough story, at least for the owners and operatives of those spindles which were junked, but equally bad was the fact that, coupled with the decrease in spindles in place, were 20 years of operation for the average mill on the basis of a return for their goods insufficient to properly maintain their plants and insufficient to provide to the operatives of the mills a wage comparable with the wages paid manufacturing employees in other more successful American industries. The result was inevitable: our industry became known as a backward industry, a low pay industry; yea, some even accused our industry of being a blight on the American industrial picture.

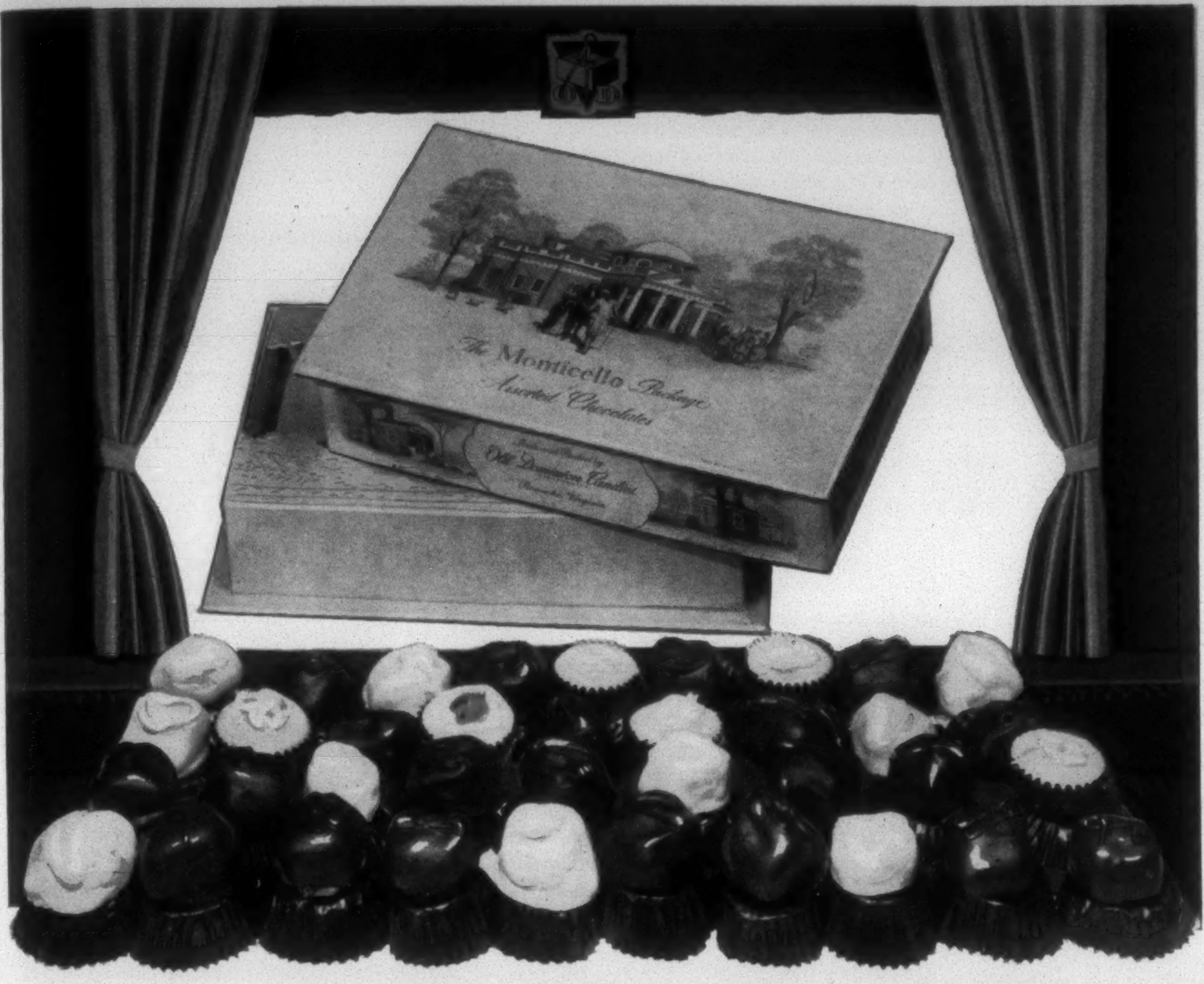
During the last ten years our situation has changed. The increase in demand for our products, brought about by the needs during the war of our own armed forces and those of our allies, and the post-war demand for textiles from the entire world, has given us the courage and the wherewithal to begin a program of improvement of our machinery and to pay to our employees a wage fully in keeping with the wages of other American industries.

The question which faces us today is simple. Will we be lulled to sleep in the warm sunshine of the present, or will we now begin in earnest to prepare for the cold hard winter which is inevitably ahead of us? Upon our answer to this question and our resolution in putting our answer into effect depends not only the financial interests of the owners of our textile industry, but the welfare of two much larger and more important groups: namely, the 523,000 textile employees who are presently enjoying the American standard of living and, second, the 2,000,000 American cotton farm families who are now almost entirely dependent upon domestic mills to furnish the market for their cotton. During the year 1947, 81 per cent of the cotton grown in the U. S. A. was spun in the U. S. A.

If our answer is that we intend to keep our present spindles running full time in the future, we should begin now, before it is too late, to get our house in order. During the year 1947, 14 per cent of the cotton textile goods produced in the U. S. A. was exported. This is a new situation; from 1790 to 1932, the United Kingdom was the leading exporter of cotton goods. From 1933 to 1939, Japan held this position. But since 1940, the United States has been the world's largest exporter of cotton goods, the 1,490,000,000 square yards which we exported in 1947 being the largest export volume in the history of our industry. It is my firm conviction that it is necessary for us to hold and continue to develop our export business in textiles for the following four reasons:

First: The present spindles in place in the United States, if operated at full capacity, will produce more goods than are required by normal peacetime domestic consumption. Only by exporting a substantial part of this production can we continue to provide full-time employment for the workers in our American mills. There are, generally speaking, and particularly in the South, no alternative employment possibilities for our cotton mill operatives, and if the cotton mills don't run, unemployment is the inevitable result.

Second: There was a time in the past when the largest part of the American cotton crop was exported in lint form to supply the textile mills of the world. This situation, due to increased cotton growth in other parts of the world, currency difficulties, etc., has now been completely reversed,



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THE SOUTHERN BOX MAKER WITH A NATIONAL REPUTATION and now the American cotton farmer finds that his market for his cotton is almost exclusively the American spinners. So important to our over-all domestic economy is the economic health and prosperity of our American cotton farmers that we cotton spinners must so arrange our affairs that we can continue to furnish our farmers a market for practically their entire crop and at a fair price to the farmer.

Third: If we are to continue to furnish employment to our operatives and a domestic market to our cotton farmers' we must in the future operate our mills at a profit. There has been criticism from certain quarters concerning the recent profitable operations of our industry. It would be well for all those who really wish to look at the matter fairly to remember that from the year 1924 through the year 1939 the cotton textile manufacturers in the U. S. A., taken as a whole, not only failed to make any profit at all, but operated at a net loss for the 16-year period. The recent profitable operations of our industry have not only been reasonable considering the long term, but in fact such profits have been a life saver to our industry. Only by operating at a profit can we attract the new capital which is constantly needed to keep our mills and our machinery modern. Under the American system of mass production at low cost we cannot expect to make a profit except by operating our spindles approximately at capacity. On the basis of present selling prices for our finished product and present cost of manufacture, we will find our profit eliminated and our black figures turned to red if we should allow our production to be curtailed even as much as 20 per cent from present levels.

Fourth: (and by no means the least important reason why we must hold and develop our peacetime export market for our textile products) the essential role of the U. S. textile industry in our national defense program. During the recent war our industry was called upon to furnish necessary textiles to our armed forces and those of our allies while at the same time supplying essential domestic requirements. If our spindles in place now, for lack of demand for our products, are, through ruinous competition and lack of profit again reduced in volume as they were during the years following World War I, we will be in no position to cope with an international emergency, should one arise. A strong, virile, efficient, adaptable domestic textile industry with spindles in place not less than at present is absolutely essential to our national security in time of war.

Perhaps at this point you are sold on the idea of holding and developing our export markets for textiles or, more likely, you were already convinced of such necessity before you came to this meeting. All right then, what can we as individual manufacturers do to bring this about? I would say that *first* and foremost we should continue to keep our manufacturing facilities modern, efficient and capable of producing goods at the lowest possible cost, while at the same time continuing to pay a fair price to the American farmer for his cotton and a fair wage to our employees. To do this, I am convinced that we need to give even more attention and financial support to improved manufacturing methods and processes which are achievable only through scientific research and technological development.

Second, we should put our thinking on a more international basis. We must familiarize ourselves with the markets and peculiar demands not only of our domestic customers but of the requirements and preferences of all countries of the world. As an example of the disastrous effect which can come from a relatively simple international economic event, take the case of the recent edict by our friends to the north of us, occasioned by the shortage of American dollars, which will cause our U. S. exports of textile goods to Canada to be reduced from 278,000,000 yards in 1947 to a maximum of 85,000,000 yards during 1948. It is revealing to note that this loss of volume is twice as great as would be represented by the loss of our entire market for domestic cotton goods going into flour bags.

Third, we must, through the facilities of our various trade associations, become familiar with all angles of world trade and exert our joint and individual efforts to remove any and all natural and artificial barriers to our products in the markets of the world. By this, I do not mean that we should give up our sovereignty, or sell our birthright for a mess of pottage by joining the I. T. O. or any other group based upon a similar unsound policy.

Ransom E. Aldrich

IN representing American cotton farmers on this occasion, I take the viewpoint of a supplier addressing his customers. You are our customers, and our business is to cater to you, study your needs, give you the best product that you can get. I know that your decision to buy or not to buy cotton must be based entirely upon one consideration—namely, whether you can make more money by processing cotton than by processing any other fiber. This is the only viewpoint you can afford to take. We have no illusions on that score.

In taking this approach, which I believe is the constructive one, we shall set aside any sentimental attachments that we may have to cotton on the basis of the experience that we have had with it, the important part that it has played in American history, and the great stake which millions of Americans have in its future.

There is a general feeling that cotton production and cotton technology have not kept pace with the progress made by many other major commodities. For many years, cotton had no serious competition for most of its markets. In such a situation, it was rather natural that cotton should not be one of our most progressive commodities, in the fields of scientific and technological progress.

This situation, however, has changed significantly within recent years and even within recent months. In the past few years, there has been a great stirring, an awakening. Cotton is definitely rising to meet the challenge of the new era of fiber technology into which we seem to be entering. Only within recent years have cotton's potentialities for meeting that challenge been anything like adequately explored.

Under the stimulus of competition, cotton has found within itself a new strength and greater potentialities to serve your needs and in turn the needs of the ultimate consumer. As a means of improving the competitive strength of cotton and increasing its usefulness to mankind, the producers are taking positive and determined steps to see that a better cotton is produced, processed and delivered to the mills more efficiently.

Over the long run, reductions in price depend on reductions in cost. It was by this process that the rayon industry, for instance, made its great achievements in price reductions; and it is only by this process that cotton can do likewise. Our young and vigorous competitor, rayon, has already made great achievements in the field of cost reduction. They are notable, outstanding achievements. It is only realistic, however, to point out that after an industry has made drastic achievements in this field for a long period of years, it tends in the course of time to reach a leveling-off place, from which further reductions must come more slowly and with increasing difficulty. The future cannot possibly hold the dynamic potentialities that it once held for most of cotton's competitors.

On the other hand, as we study the still undeveloped potentialities of cotton, we see distinct possibilities for increased efficiencies and improved qualities. Its major dynamic possibilities still lie ahead. Efforts to achieve these potentialities are just now getting under way. For instance, mechanization and other labor-saving practices hold promise of revolutionizing the traditional pattern of Southern agriculture. Hand methods in weeding and harvesting are just now beginning to give way to mechanical power operation; and cotton, instead of being a single enterprise, is now being fitted into a better balanced and more efficient overall farming system. Man-hour labor requirements for the production of an acre of cotton can be, and are being, drastically reduced. In the Delta or Alluvial Plain area, for instance, the reduction is from 135 to 160 hours to from 17 to 27 hours, depending on the type of equipment used. Not all areas lend themselves equally well to mechanical operations, but in all areas there are distinct opportunities for improvement in the usage of better machinery and equipment and better practices.

As an indication of the extent to which power machinery is being introduced and mechanization is taking place, the number of tractors in the ten major Southern cotton producing states more than doubled from 1940 to 1947, with an actual increase from 223,238 to 565,761 which is 253 per cent of the 1940 number. This phenomenal increase was made during a seven-year period when the supply of power machinery and attachments was sharply limited as a result of the pressure for the production of war materials.

The breeding of better varieties of cotton, adapted to specific uses, ranks with the mechanization of cotton production both in importance and in the continued intensive attention being given to it. Geneticists and breeders are developing and testing new strains, especially for increased yields of both lint and seed, staple length, boll size, earliness, disease resistance, fiber strength, fiber length, uniformity, and improved spinning qualities. Besides trying to meet these demands, breeders are striving for cotton varieties adapted to mechanical production and harvesting. At every stage, agricultural engineers are co-operating.

More effective fertilization and better cultural practices are already increasing yields tremendously. Yields have more than doubled in many areas since the early years of the cotton control program. The average increase in yields for the cotton belt as a whole from 1926-1930 to 1941-1945 was 55 per cent. Recent developments that have made available anhydrous ammonia, a relatively cheap nitrogen, will, no doubt, along with other improved practices, be instrumental in further increasing yields and in improving quality.

There is, moreover, a distinct and significant shift now taking place in cotton acreage to those areas having a comparative advantage in its production. In nine of the ten major Southern cotton states, since the 1935-1939 period, cotton acreage in 205 counties decreased only one-sixth, or from 8,400,000 acres to approximately 7,000,000 acres; whereas in all other cotton counties, well over twice as many, it decreased from 8,000,000 acres to 3,900,000 acres, or 51 per cent. And in Texas, six crop-reporting districts decreased cotton acreage 13 per cent, or 200,000 acres, while five others decreased 57 per cent, or 2,200,000 acres. In general, the shifts have been to areas having higher yields per acre and greater production per worker, which tends to lower cost of production.

Tremendous progress is now being made in cotton insect control. More synthetic organic compounds possessing outstanding insecticide qualities have become available within the past half dozen years than in all the previous years in which systematic research has been carried out. Even

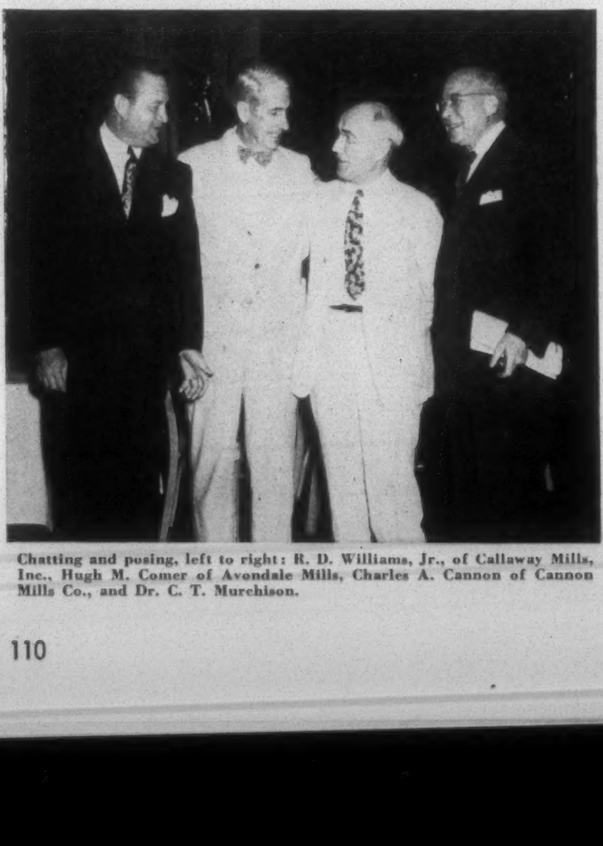
Showing some of those in attendance during the opening business session.

though most of these are still subject to field testing, there is every reason to expect better insect control in the future, which will mean a significant increase in yields and in quality.

Intensive work is now being done on both the state and federal levels, pointed towards increased efficiencies in ginning, packaging, storing, grading, and merchandising of both lint and seed. Research and educational activity will be expanded and intensified in these fields as additional funds under the Research and Market Act of 1946 are made available.

The future usefulness of cotton to you will depend on two fundamental considerations: price and quality. We have made it plain, I hope, that through science and engineering the production of cotton is going to be made vastly more efficient in the future than it has been in the past. When we speak of these vast improvements we are not spinning dreams, but talking facts. The exact form that every improvement will take is of course not yet known, but there is a lesson to be learned from the little beginning that has been made by our cotton scientists and cotton farmers in the fields of mechanization, genetics and breeding, disease and insect control, fertilization, cultural practices, and farm management. The lesson is that in the years ahead we are going to make cotton a great deal more attractive to the spinner by lowering the price, while at the same time we are making it a great deal more attractive to the farmer by lowering the cost of production. Speaking to you as a life-long farmer and as the representative of many thousands of farmers, I advise you to learn that lesson well before you make your commitments for the future.

Now let's talk about quality. When we think of the quality of cotton, we think of it in relation to the end-use markets which the fiber must serve, and we think of it in relation to the other fibers that compete with cotton in each of those markets. Cotton has hundreds of important end uses. In this country alone there are 22 uses for cotton which each take more than 100,000 bales a year, and there are 63 uses which each take more than 10,000 bales a year. Those markets are very different and very exacting in their quality requirements. They range all the way from curtains and tablecloths and pillow cases and women's finest garments, to bags and awnings and machinery belts and tire cord and overalls. In practically every market, cotton faces a different line-up of competitors. They include all the natural fibers (wool, animal hair, silk, kapok, the bast fibers such as jute and linen and ramie, the leaf fibers such as sisal and Manila hemp); they include all the artificial fibers (rayon, glass fiber, nylon, the protein fibers such as Aralac, the synthetic resin fibers such as vinyon and saran); and they include a long list of rugged competitors outside the fiber field, among them being paper, wood, and unsupported film.



Chatting and posing, left to right: R. D. Williams, Jr., of Callaway Mills, Inc., Hugh M. Comer of Avondale Mills, Charles A. Cannon of Cannon Mills Co., and Dr. C. T. Murchison.

We are just beginning to understand the exact significance of cotton's quality in relation to all these competitors in all these different markets. The National Cotton Council, with fine co-operation from the American Cotton Manufacturers Association and many others, has had its scientists and market experts busy on a complete survey of cotton's competitive position in every end-use market. We have been taking the measure of our competition in terms of merchandising, price and quality. On the basis of market and scientific information that we now have in hand, I think I can summarize in two short statements what it is about the quality of cotton that enables it to hold a great deal more than half of the textile markets of the world:

First: Cotton enjoys an enormous advantage in *versatility* —by that I mean that cotton is endowed by nature with a wider and more complete range of desirable physical properties, all present in the same fiber at the same time, than any other fiber that the world has yet seen.

Second: This advantage of versatility is a great deal more important in winning and holding markets than most of us have appreciated in the past—for every important textile market requires not one or two or three desirable qualities, but a great range of them—and by overlooking any one essential quality, we can make the mistake of thinking that some other fiber is as serviceable as cotton, only to learn from actual experience that it is not.

The real distinction of cotton rests not on being *tip-top* in any particular quality but on being *very good* in almost all of the many qualities that are of real, practical importance. Cotton is strong, and its strength becomes greater when you dump it in a tub of water. Cotton has wonderful abrasion resistance—the ability to take wear. Cotton is soft, absorbent, comfortable against the skin. It has ideal pliancy and endurance under folding. It is endowed with excellent vapor permeability—the quality of allowing body moisture to evaporate freely through the garment. The chemistry of the cotton fiber is such that it does not shrink or elongate badly, and it lends itself to easy, dependable pre-shrinking. Cotton stands up well under heat, under moisture, under sunlight. It resists the harmful effects of perspiration. It has natural advantages for water repellency. And so on through many other qualities that are of real importance in getting and holding markets. But the really significant point is that cotton has *all these qualities at once.* That is the point which makes it the marvel and the envy of textile scientists everywhere, and that is the reason why cotton has a much firmer grip on its market than we sometimes appreciate.

A survey of scientific test results, supporting everything that I have mentioned about cotton's quality, is summarized for quick reading in the little booklet of the National Cotton Council, entitled *Discovering Cotton.* If you haven't read it, I suggest that you do so, and if any facts contained in it are of special interest to you, I urge you to get in touch with the very competent scientists and engineers on the Cotton Council's staff who made this survey and who stand behind it. They are ready and eager to give you every possible help.

I have been talking about cotton's quality in terms of what the scientist and the market specialist have to say. But there is another authority on fiber quality whose opinion we respect even more than that of the scientist. I refer to the authority who makes the final decisions—the American housewife. Recently the Department of Agriculture completed its first nationwide survey of consumer opinion on the competitive position of fibers. All women shoppers in the country were represented in the scientific sampling of opinion. The survey covered 16 items of women's apparel and household furnishings. The items studied were not those in which cotton has as yet had little competition, such as sheets, pillow cases, and towels. They included only those in which two or more fibers are not available in substantial quantities for the housewife's selection. Of the 16 items in the survey, the results showed that American women strongly prefer cotton in 11, while cotton is tied for first preference in a 12th item, and three other fibers share first honors in the other four. On the basis of practical experience in those end use markets where a large amount of real competition now exists, the housewife has decided that cotton leads the field by a tremendously wide margin in the qualities that count.

The raw cotton industry, however, does not propose to rest its case on the quality position that our fiber holds today. We know that the quality of fibers is a relative concept, and that the quality of our competitors will be improving. We respect the proven ability of the rayon industry and of other great industries to turn out a product that becomes better and better through the years. We are therefore thinking of cotton's quality in terms of how to keep it the best and most versatile fiber indefinitely in the future. Our studies of cotton's present quality position are valuable chiefly because they give us a firm, factual basis from which to launch our future campaigns for further improvement.

Does cotton offer as much promise of future improvement as any other fiber? Most emphatically, it does. I have already pointed out the great advantage which is available to cotton in the field of genetics and breeding. The scientists in this field are concerned just as much with quality improvement as with cost reduction. They have already made great improvements in quality, but they have only scratched the surface of their possibilities. If the synthetic fibers have any real advantage over cotton in any other field of science, I feel that it is fully offset by the special potentialities for building further improvement into the cotton fiber through the science of genetics. In addition, cotton has a great opportunity to strengthen its relative quality position by better ginning and particularly by the development of better cleaning operations at the gin.

In the fields of spinning, weaving, knitting, finishing and fabricating—particularly in the great field of improved finishes—cotton certainly offers as much opportunity for

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advances in quality as any other fiber could possibly offer. Cotton's natural strength, its chemical stability under finishes, and its general versatility should make it particularly attractive for experimentation with new processes of every sort.

The fact of the matter is that cotton's failure to go forward more rapidly in quality improvement has not been due to any lack of natural opportunities, but rather to the fact that no one has fully taken advantage of those opportunities. I am not trying to assess any blame, because I feel that all of us who have worked with cotton through the years have a rightful share in the blame. I am simply observing a fact. The crux of the matter is brought home forcefully in the survey of housewife opinion to which I just referred. A test was made to show what American women like and what they dislike about cotton products. With very few exceptions, the qualities that they like are inherent in the cotton fiber itself from the time it leaves the farm, while the qualities they dislike are qualities that result from the way the fiber is processed and not from the nature of the fiber at all. Where similar information was obtained for other fibers, the story was just the reverse: The qualities the customers like are put into the product by superior processing, while the qualities they dislike are inherent in the fiber and inseparable from it. Cotton is the fiber which has been most neglected and could be most improved through processing.

One big reason why more has not been done to improve the quality of cotton products is that there has been a dearth of information on the fundamental nature of the cotton fiber. Not enough money has been spent on fundamental research to provide the basic information which must be available before much can be achieved through applied research. I am happy to say, however, that under the Research and Marketing Act of 1946, in which I have taken a great personal interest and under which I am now serving as chairman of the Cotton Advisory Committee, funds are being made available for a very substantial increase in the program of fundamental research on cotton. We are counting on a great further increase in this work. I think it should be of practical interest to you that this program will inevitably open up new opportunities and new challenges for the research departments of our textile mills. You cannot reasonably be expected to finance much of the *fundamental* research, but as this type of research is expanded, you should have an impelling interest in taking advantage of it by expanding your own programs of *applied* research. If we are to have an adequate program of applied research in the textile field, it must come primarily in the research departments of the textile mills. In the years ahead, the opportunities for applied research on cotton textiles are going to be greatly increased. I hope and trust that the textile mills will seize upon those opportunities aggressively and give them actual application. We are living in a day when no industrial firm can hope to hold its own unless it has a live, alert, progressive department of applied research.

I have been speaking to the customers of the cotton farmer. In its essence my message to you is this: *As for price*—there is no other fiber which holds the promise of so much reduction in production cost, and of consequent reduction in price, as cotton. *As for quality*—there is no other fiber which is as useful as cotton today and no other which can excel its great potentialities for further improvement.

Not only do we have the possibilities, but today we also have a widespread awareness of those possibilities and of the urgency of realizing upon them. Today we have a new and potent influence in the National Cotton Council, backed by the resources and leadership of the whole raw cotton industry, and devoted to the objective of making cotton more useful and acceptable to you. Today we have the Research and Marketing Act, which is intended to put enough funds behind cotton research to give this fiber a real fighting chance to go forward in technology, and we have the first stirrings of a great expansion of private expenditure on cotton research. We are at the beginning of a new day in the technology of cotton. We face a future in which cotton will no longer be one of the most backward of fibers, depending on its huge natural advantages for survival—but in which cotton will move out instead to the place which it once occupied—at the very forefront of progress in the whole textile field.

Standing not upon the bygone past but on our prospects for the future—standing not upon sentiment but upon hard facts—we recommend our product to every progressive, forward-looking textile executive as one in which he can afford to invest his research effort, his sales effort, his planning, his loyalty, and his confidence.

Stanley B. Hunt

THERE is always some risk in asking an economist to talk before a group of practical mill men, especially when you don't know what he's going to say. But Dr. Jacobs refused to elaborate on the content of the subject assigned me, "The Place of Synthetic Fibers in the Textile Field." I'm sure he didn't want me to come here simply to say the one word "larger" and then sit down. Nor would I impose on your hospitality by reciting a lot of statistical data on the synthetics. So I will first talk directly to the subject assigned me and then will chance a few observations on the textile industry as a whole, which I trust will be of interest to you.

Synthetic Fiber Productive Capacity

First, let us consider the size and importance of the synthetic fiber industry in this country. United States production of rayon, nylon and other synthetic fibers totaled about 1,030,000,000 pounds in 1947. A recent survey of new synthetic fiber capacity planned indicates a total of around 1,250,000,000 pounds annually by early 1949 and a productive capacity of approximately 1,300,000,000 pounds by the end of 1949. These figures do not include the proposed plants of two producers who have stated that they will build additional rayon plants when building costs and conditions are more propitious.

Rayon and synthetic fibers constituted 16 per cent of the 6,450,000,000 pounds combined consumption of cotton, wool and synthetics in 1947. If all of the planned synthetic yarn capacity is realized and utilized in 1950 and the consumption of cotton and wool stays at the high 1947 levels, then rayon would constitute 19½ per cent of that 1950 total of 6,700,000,000 pounds.

The distaff division of the A. C. M. A. staff was persuaded to pause long enough for a picture. Left to right, Leona Bell, Ruby Huntley, Emmie Jennings, Janet Johnston and Julia Long.

A brief look at the world rayon picture shows 1947 production at about 2,000,000,000 pounds, which is 29 per cent below the peak year 1941 output of 2,825,000,000 pounds. These totals, however, may be misleading unless it is realized the 1941 figure consisted of 1,710,000,000 pounds produced by Germany, Italy and Japan and 1,115,000,000 pounds for all the rest of the world; but the 1947 total will comprise only about 300,000,000 pounds for the former Axis partners, while other countries have increased their output to 1,700,000,000 pounds or by 52 per cent.

From another angle, there were 25 countries producing rayon in 1938. By the end of 1948, there will be 31 countries actually producing rayon and four more countries building or planning their first rayon producing plants. This increase in the number of rayon producing countries stems from a desire for at least partial national self-sufficiency in textile fiber supply and may also represent a protest against the high prices of the natural and synthetic fibers that otherwise would have to be imported. In addition, of course, the proven attributes of rayon have also had their bearing in the creation of these new plants.

Style, Quality and Price

I would next like to consider with you some criteria of inter-fiber competition. While some of the textile marketing studies of the past couple of years represent a workmanlike job on the part of researchers, the ladies of the consuming public apparently have an unfortunate way of saying one thing and doing another. As Miss Irene Blunt of the National Federation of Textiles said recently, "Women prefer cotton and love silk, but they seem to buy rayon." We must not forget that any one textile product competes with many other similar textile products and that the final sale is made on the composite bases of style, quality and price. Let us briefly examine these three factors, particularly as they relate to rayon.

As regards *price,* the historical price trend of rayon has been downward, especially in its competitive relationship with other fibers. Thus the absolute price of rayon yarn declined from a peak of $6 a pound in 1920 to a list-price low point of 49 cents per pound in 1938 for the 150-denier viscose cones; from that point, the price increased to 55 cents just before the war and was held at that same figure by the O. P. A. until November, 1946. Today's price of this yarn is 74 cents a pound, which represents an increase of 34 per cent over the pre-war price. The corresponding situation in cotton is a typical recent price of 35 cents a pound, which represents a 250 per cent increase over the 1940 average figure of ten cents a pound.

A second characteristic of rayon prices is their relative stability over long periods of time. Thus in the eight-year period from 1934 to 1941, there were 12 major changes in rayon yarn list prices, which means that a given quotation for rayon held at one figure for an average period of eight months. Rayon pricing has never shown any tendency to speculation such as is frequently encountered in cotton and silk, for example. Rayon's relative price stability thus makes textile mill costing and budgeting more reliable and also provides more protection against changes in inventory values. Price stability facilitates the primary task of a textile manufacturer, which is to manufacture goods, and it allows his profit to reflect the efficiency of his operation rather than his ability or inability to anticipate the rise and fall of his raw material prices.

The *style* factor, of course, applies mainly to apparel and household textiles as opposed to industrial uses. It is an aspect most difficult of statistical measurement and thus becomes the greatest stumbling block to the market analyst. In designing a rayon dress, for example, the concept of style would include the proper selection of a wide range of materials and services, among which may be mentioned the following: (a) the yarn employed in weaving the cloth (fine or coarse denier, regular or multifilament, bright or dull luster, the process by which the yarn is made, etc.); (b) the weaving construction and the count in which the cloth is made; (c) the dyeing and finishing of the fabric (incorporating color, draping qualities, hand, etc.); (d) the cutter's techniques and abilities; and (e) the way the dress may finally be distributed and merchandised in the style world. With such an array of individual operations necessary to produce a dress, the old adages of "too many cooks spoil the broth" and "a chain is no stronger than its weakest link" come readily to mind. Suffice it to say that rayon has had remarkable success, from the styling point of view, in its competition with other fibers.

The final element of *quality* is subject to somewhat more exact measurement, and yet here too there are many facets to be considered. For example, it is not sufficient to simply say that a mill is making a "rayon taffeta;" for we must also know the quality of the rayon yarn used, the quality of the weaving job done, the quality of the dye and finish applied to the fabric, and the quality built into the finished garment by the cutter. All of these, as well as other factors, naturally determine the quality of the final product.

Under certain circumstances, such fabric or garment qualities as wrinkleproofing, ease of dry cleaning or laundering, good wear or resistance to abrasion, color fastness, and a multitude of other quality aspects may be important to one degree or another. When the sum total of these quality considerations are added together, then we may speak of the over-all quality of a given fabric designed for a certain end-use.

As I say, the competitive position of any fiber is determined by its better performance than some other fiber on these composite tests of quality, style and price. And it is on the basis of these three tests, over a period of time, that the rayon and synthetic fiber industry has shown such a spectacular growth in consumption.

Fibers Designed for End-Use

Closely related to the determinative factors of style, quality and price is the ability of a fiber to *improve* its position in one or more of these attributes. This important aspect of rayon's past and future development rests on the ability of producers and fabricators to design new fibers for specified end uses.

In his 1944 Marburg Lecture, "Textile Fibers—An Engineering Approach to Their Properties and Utilization," the late Harold DeWitt Smith said in part, "The essence of this new philosophy is that fibers can be designed to meet specific textile wants rather than that textile wants must be designed to utilize immutable fiber 'personalities.' . . . There is a wide and exciting horizon of the future in which the only real limitations on the variety and the characteristics of textile fabrics yet unborn will be the ability of the textile designer and technologist to help the fiber maker to understand what kinds of fibers are wanted. This is an engineering job, for the engineer stands midway between the scientist and the craftsman. The latter has learned to know the natural fibers by generations of inherited, and years of first-hand, experience. . . . The scientist, stimulated to investigate all textile fibers by the acceptance of his own inventions, . . . has made great progress recently in understanding the molecular architecture of these materials and in explaining their mechanical behavior in terms of the strength of chemical bonds and other cohesive forces between the atoms and between the molecules. The engineer, or the textile technologist with an engineering viewpoint, now has the opportunity and the responsibility of bringing the scientific knowledge about textile fibers down to earth in order to give the textile craftsman and technician the means of understanding and using such knowledge for the benefit of the industry and of the textile consumer."

The only things I can add to this fine summary of Dr. Smith's are a couple of illustrations of the tailoring of synthetic textiles to specified end-uses. The development of *rayon tire yarn* immediately comes to mind.

Without going into the merits of cotton versus rayon tire cord, two aspects of that situation may be pointed out. First is the element of uniform quality. In this particular, the rayon tire cord is produced according to specification; it is delivered to the tire company in completely uniform lots; and the quality of the yarn does not vary from day to day or from season to season. In using cotton, on the other hand, the tire company has to spend extensive amounts of money to measure the quality of individual lots of cotton which it buys and, in turn, blend those lots so as to produce cotton tire cord of a uniformly high quality.

Second, I am told by the production manager of one of the large tire companies that, with a current rayon tire yarn price of 53-55 cents per pound, the competitive price of raw cotton for passenger car tires would be about ten cents a pound. But for truck, bus and heavy duty tires, rayon has so many advantages that the tire manufacturer still would prefer rayon over cotton at almost any price. Unless such a statement might make the rayon industry too sanguine about its prospects in the tire cord picture, however, it should be recalled that nylon also is successfully used in tire manufacturing and there are reports of other new synthetic tire yarns still in the development stage; in addition, successful experimentation with fine steel wire for tire cords is reported.

To cite another example, the outstanding success of *nylon* to date has been due to its unusual properties of strength and elasticity, which make it a hosiery yarn far superior to silk. This accomplishment is especially significant when it is realized that the nylon yarn in a pair of women's full-fashioned hosiery, retailing at about $1.50, costs less than 12 cents. Many other synthetic materials also have been designed and developed to do certain jobs better than they have been done before—the examples of vinyon for filter cloth and saran for public conveyance seat covers may be mentioned for illustration. Over the next several years, we surely will be hearing a lot more about synthetic fibers engineered to specific end-uses.

What is a Weaver?

Up until a few years ago, the lines of product or machine demarcation in the textile industry were emphasized by a strong correlative fiber description. In the broad weaving industry, for example, we used to have worsted broad weavers, cotton broad weavers, silk broad weavers, etc. A silk weaver never wove cotton, nor would a cotton weaver touch wool. But the advent of rayon apparently has gone a long way toward breaking down these fiber demarcation lines in the textile industry, and rightfully so. We hear less and less about *cotton* weavers or *rayon* weavers and more about just plain *good* weavers. Even the usage of the words silk and cotton in the corporate names of textile mills has decreased year by year.

The executive of a large weaving concern told me a few years ago that his company was one of the largest silk weavers in this country during the 1920s. By 1940, his concern had dropped the weaving of silk entirely and had become one of the largest rayon weavers in the United States. However, he very properly concluded his story with—"I am first and always a weaver. If some day it is consistent with the best interests of my employees, my customers and my company, I may even weave cornstalks if that will show a profit." This man, as I said, is truly a *weaver* and is never sidetracked, either by nostalgia or by lethargy, into becoming a fiber protagonist. He surely will be among the important developers and users of the engineered fibers of the future.

Textile Consumption and Demand

Next I would like to examine with you a few angles of the current production-demand picture in the textile industry. In order to obtain perspective on the status of cotton, rayon and wool consumption today versus pre-war, I have derived some figures on net civilian per capita textile consumption in this country. These data take into account the

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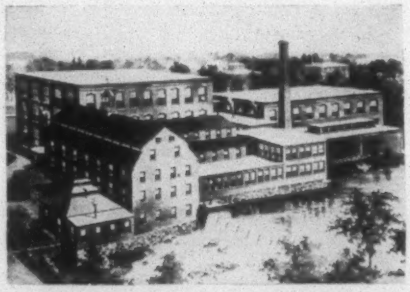

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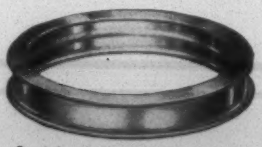
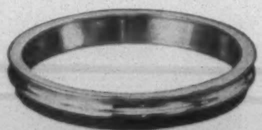


Standard DIAMOND FINISH Flange Ring

Eadie Laced Wick Oil-lubricated Ring



Common Flange Ring for Heavy Twisting

Eadie Multiple-groove Greased Ring

domestic consumption of the three fibers in the United States at the mill level, and they are adjusted for net imports and exports of fabricated textile products; the word "civilian" means that the rated war uses of textiles have been eliminated from the figures.

The net civilian per capita consumption of cotton, rayon and wool in the pre-war years 1936-1940 averaged 31 pounds, of which cotton was 25.2 pounds, rayon three pounds and wool 2.8 punds.

For the 1941-1945 period, the net civilian per capita consumption of cotton declined very slightly to 24.8 pounds, while rayon rose to 4.3 and wool to 3.1 pounds, which means that the three-fiber total rose slightly to 32.2 pounds. The respective 1947 data were 27 pounds, 6.3 pounds and 4.9 pounds or a total of 38.2 pounds, which was 23 per cent above the pre-war 1936-1940 average.

A second comparison of the pre-war and the current status may be made on the output of cotton and rayon broad woven goods. Thus we find that rayon fabrics constituted 9½ per cent of the rayon plus cotton broad woven goods produced in 1937. But rayon broad woven fabrics today account for nearer 17 per cent of that total yardage. If the large yardage of cotton fabrics going into industrial uses could be eliminated in this comparison, then rayon fabrics would be an even higher proportion of the total cotton plus rayon broad woven goods consumed in apparel and household uses.

A third facet of this demand picture is the textile industry's share of national income over the past several years. According to the U. S. Department of Commerce, textile expenditures (including footwear) constituted the following percentage of total personal consumption expenditures: 10.2 per cent in 1936-1939, 10.7 per cent for 1941, 13.3 per cent for 1942-1944, 14.2 per cent for 1945, 13.2 per cent for 1946 and 12 per cent for 1947. These figures clearly show that, while 1947 textile expenditures were a larger part of total consumer expenditures than they were pre-war, nevertheless this 1947 percentage has markedly declined from its high wartime level. Also, these data can provoke conjectures from the armchair strategist as to what may happen to the percentage (a) when housing and durable consumer goods can be bought as freely and easily as textile goods can now be bought and (b) when total personal consumption expenditures may decline from their current high level of over double the 1936-1939 average.

A fourth angle on demand is the possible effect of the Marshall Plan or E. C. A. program on textiles. An examination of the published E. C. A. programs as they relate to textiles indicates to us that it will be surprising if total 1948 textile exports (E. C. A. plus privately negotiated exports) exceed the actual 1947 figures.

Finally, there is talk of a military preparedness program and expenditures of billions of dollars are mentioned. However, it would be well for us in the textile industry to recall the difference between a preparedness program, such as we had in 1940-1941, and a wartime textile program. As Secretary Forrestal has stated, 61 per cent of our national product went for war in the peak year; but next year's budget, including the modest arms program recently recommended, represents a little over five per cent of our national product. Specifically, the recent Truman-Forrestal proposal itself would amount to less than 1½ per cent of gross national product.

Profits and Efficiency

I have a final thought for you on profits and efficiency in the textile industry. I call to your attention that the war economy, together with government pricing policies generally, was geared to the proposition that essentially all of our productive capacity had to be utilized, right down to the least efficient producers. Thus the normal competitive price relationships in the textile industry had to be suspended for the duration, to the end that the nation's output of all textile products necessary to the prosecution of the war would be at a maximum.

Suppose, for example, there were 100 weavers making War Cloth A, which was government priced at 20 cents per yard. Then the most efficient producer, whose cost was say 15 cents a yard, "made a killing" before the excess profits tax; and even the least efficient producer, whose cost was 20 cents a yard for the same construction, still kept producing because his overhead charges were carried even though his net profit was zero.

Since the end of the war and the O. P. A., this situation has not only continued but has been accentuated—for now, even the former marginal producer is making a profit. And all of this is accomplished in spite of higher raw material and labor costs. I am not going to discuss the question as to whether these textile industry profits are too high or too low, either actually or relatively. But I *am* going to suggest to you that the textile industry's post-war reconversion, which many people seem to have blithely assumed was accomplished with little or no pain back in 1946 somewhere, actually has not taken place as yet. By reconversion I do not mean a simple changeover in production from Army cloths to civilian cloths; rather, I mean the reconversion from the guaranteed profit structure of the war period to the tough realities of the competitive economy, which is the essence of our system of capitalistic democracy. In fact, I suggest that the textile industry today may be further from this true reconversion than it was in September, 1945.

Reconversion eventually will come to our textile industry, of course. Perhaps it may even begin over the next few months, if it turns out that the third round of wage increases cannot simply be reflected in product price increases, as they have been in the past.

The efficiency of any company, textile mills included, may be answered in at least four main aspects, namely, machines, materials, labor and management. Modern machines laid out in an efficient manner; labor operating this machinery efficiently at a high hourly wage, but at a correspondlingly low per-unit cost; modern raw materials fabricated into products that will yield optimum service to consumers; and a wide-awake management that will bring these three forces together and blend them into an efficient operation.

Based on these tests, the efficient textile mill surely need have no fear of reconversion to a competitive economy. But many other textile mills are due for a rude awakening when this true post-war reconversion comes and when the inefficiencies that have crept into one or more of these four phases of their operations are suddenly brought to light. As a result of this latter reconversion, it would be a sad sight indeed, yet one which I am afraid we may witness, to watch some sub-marginal producers of textiles descend on Washington some time in the future, pleading for government succor and assistance because of their inefficiencies of the past. That picture surely would warm the cockles of the hearts of the bureaucratic planners in our Capital City, who I am sure are there even now and waiting for our brethern.

Claudius T. Murchison

IN order to appreciate this report of mine on the British textile situation, I think we first should get to the beginning, its proper background and we will start with the American side of that background first.

Historically, the United States has paid very little attention to export trade in textiles, although with respect to other commodities we have long been the world's leading exporter. To be sure, back in the period before World War I and even in the '20s, a number of individual firms in the cotton textile industry of the United States were doing a very fine business but, for the industry as a whole, it was extremely limited and our industry grew up in this country thinking of the local market as being the important thing and paying but slight attention to the foreign situation.

During the past few years, since the beginning of World War II, our thinking along those lines has changed materially. Today, instead of being one of the world's smallest exporters of cotton goods, we are the world's biggest exporter. Due to the logic of that thinking, beginning in 1941, last year our total exports were a billion and a half yards, approximately 14 per cent of the total production. The British exports, on the other hand, dropped down about one-third of that figure and there was a time when Great Britain exported as many as six billion yards. She completely overshadowed all the other countries of the world in her export of cotton goods. Last year her exports were slightly more than 500 millions as compared to our billion and a half.

Another element in this general export situation which is important for the background is that in 1938 and 1939 the total volume of cotton goods in the world trade was about 6½ billion yards. Last year the total volume of cotton goods in world trade was slightly more than three billion yards. In other words, there is a deficit of 3½ billion yards in world trade in cotton goods, as compared with 1938 and 1939. That is a statistical deficit; the real deficit is far more than that because during these past six years, the peoples of the world have been deprived of their customary production, their customary slice of cotton goods. So there is an extraordinary and distressing scarcity in almost every nation. Only in the nations of North America would there be an exception to that. I believe that everywhere else in the world the situation is one of genuine distress so that the real world deficit of cotton goods is vastly greater than that statistical figure of 3½ billion yards.

But the growth of the American export trade in cotton goods from 300 or 400 million customarily before the war to a billion and a half now, has made us world-trade conscious. We have adjusted our industry to that additional volume and to the additional home volume and the loss of that billion and a half yards that goes into world trade would be a very severe blow to the United States, not only in terms of diminished activity, in loss of employment and possibly continuation of liquidation of its loss of machinery, but also to the American farmer who now looks to our home industry as being the great bulwark of his continued prosperity. So we are vitally and definitely interested in the continuation of our export trade, not only because the world needs it but because we need it, as a nation, as an industry and as an agricultural producer.

At the second business session, left to right: Robert W. Philip of Callaway Mills, Dr. William P. Jacobs, Dr. Claudius T. Murchison, Harvey W. Moore and Fuller E. Callaway, Jr.

England, as I told you a moment ago—we need go back only a few years when England was the greatest exporter of cotton goods—at one time exceeding six billion yards and now down to half a million. England, with the greatest industry, in terms of spindles and looms, existing in the world, is operating that industry with only about 60 or 65 per cent of single shift capacity.

What is the reason for that? One of the main reasons is lack of manpower. The war left England in a most depleted economic situation—a large percentage of her industries were completely destroyed; a very large proportion of her residential structures, her transportation system and docks, and, consequently an enormous number of people have to be diverted into the process of reconstructing the home industry. That is only one of the reasons.

Another reason is in the post-war period it was necessary to emphasize the development of the hard goods industries because they were more vital in the future of England. There the manpower has been more than made up and, as a matter of fact, in certain activities in England, output is greater than it was before the war.

Textiles, although previously the cornerstone almost of British industry, have received the least attention in this post-war period. So, England feels that in order to get back to her former position of prosperity, she must restore her trade in cotton goods. The United States feels that in order to maintain her present prosperity, she must keep her trade in cotton goods. You could double the exports of American cotton goods today, you could treble the exports of British cotton goods today and there would still be an intense scarcity of cotton goods throughout the world.

Yet, despite that fact, there is difficulty in marketing operations in cotton goods throughout the world. The people of the Far East, who are virtually naked and who could absorb tremendous quantities of the cotton goods, are unable to get them. Why? Because of the foreign exchange situation. Japan is operating 1,800,000 spindles—and, by the way, I want you to pay close attention here because quite a lot has been said during the past few days about one of the recommendations of the mission regarding Japanese spindles—the Japanese, operating 1,800,000 spindles, which to us seems pretty small, have built up a surplus in Japan of 350 million yards, which S. C. A. P. is sitting on, looking for a way to merchandise.

With the expansion to 3½ million spindles, that rate of production would be doubled. That, as an initial target, would certainly seem a very reasonable and a very liberal thing, but the point I am making here is that even with that limited production in Japan, and with the condition of great scarcity of cotton goods throughout the world, there is a 350 million yard surplus built up in Japan. Why? Because England, on account of her intensely difficult exchange situation, cannot make the necessary exchange free for the purchase of Japanese goods.

At least that has been true up to date and that was one of the most important things that we talked about in England—how to break that log jam—so that it would be possible for S. C. A. P., merchandising those cotton goods from Japan, to sell those goods in the areas of the Far East, which are the historical markets of Japan, for sterling and take the sterling proceeds of those sales and with the sterling proceeds buy raw materials also throughout the Far East, in order to supply Japan with whatever raw materials she may need from that area.

But, of course, S. C. A. P. could not proceed on any such basis as that unless there was certainty that the sales of cotton goods for sterling produced funds which could be used to buy raw materials in the same area and in the right amount, because inability to use that sterling for that purpose would leave S. C. A. P. with a lot of inconvertible currency, because sterling is not freely convertible into dollars because of the British situation which I want to explain to you more fully and very briefly in just a moment.

So the great argument was that if we sell these goods for sterling, that we use these sterling funds then to buy the necessary raw materials and the raw materials of a character and volume that are not exactly in line with Japanese needs, then the surplus could be brought to the United States and sold for dollars, in order to let S. C. A. P. out of that difficult situation.

You see, that is for the most part—maybe up to 90 per cent, possibly 100 per cent, simply bartering, fundamentally using sterling as a money of account in the final analysis, and not as a money of exchange.

Now, it wasn't an easy thing to convince the British of the wisdom of this arrangement. I believe they did finally come around to agree with us fully and freely on that point on the assumption that such an arrangement, if it broke the trading log-jam in the Far East, would serve as a great incentive to production in the Far East and so expand the total volume of world trade and bring back to England in consequence, the dollars which she had lost in the first place theoretically by agreeing to this arrangement, and we certainly hope that that will prove to be the case.

I know that in your own minds you have been wondering why a country like England, with her world import and a world banking system, should create a situation on tight monetary control. Prior to the war, England had enormous investments throughout the entire world, mostly in the British empire. Those investments provided for England 20 per cent of the total credits which were necessary to finance her import trade. Also prior to the war, the British services, in the way of banking, shipping, insurance and brokerage operations and a hundred others of those intangible things, amounted to around 15 per cent of the total credits which she had to have to finance her import trade. So that Great Britain prior to World War I found it necessary to export only slightly more than 50 per cent of her imports.

Now this war came along and what did it do? Broke it, swept away all those foreign investments; she no longer had them. Swept away most of her intangible services and they haven't yet been completely rebuilt, so there is a great deficit there. Her imports, on the other hand, have been increased as a result of the war. Her population was still the same—slightly larger—had to have the same food and, in addition to that, had to have a tremendous sum of materials of all kinds and descriptions to rebuild the destruction occasioned by the war.

So we have a situation where Great Britain's import needs have been increased and her export possibilities, her export credits to finance those increased imports needed, have been diminished. What could she do? No. 1—expand imports, yes—which correspondingly called for an expansion of imports of raw materials.

That couldn't be the whole problem, so solution No. 2 was to cut down on those imports to the last degree possible. That's why the people of England have been going hungry. I am sure every member of our group took a very keen interesting in watching that situation they had heard so much about in this country. From the standpoint of quantity—over-all quantity of the intake of the average British person in terms of food, I think we all had the feeling that it was probably adequate. But the food is so monotonous,

Part of the large crowd which attended the second business session Friday morning.

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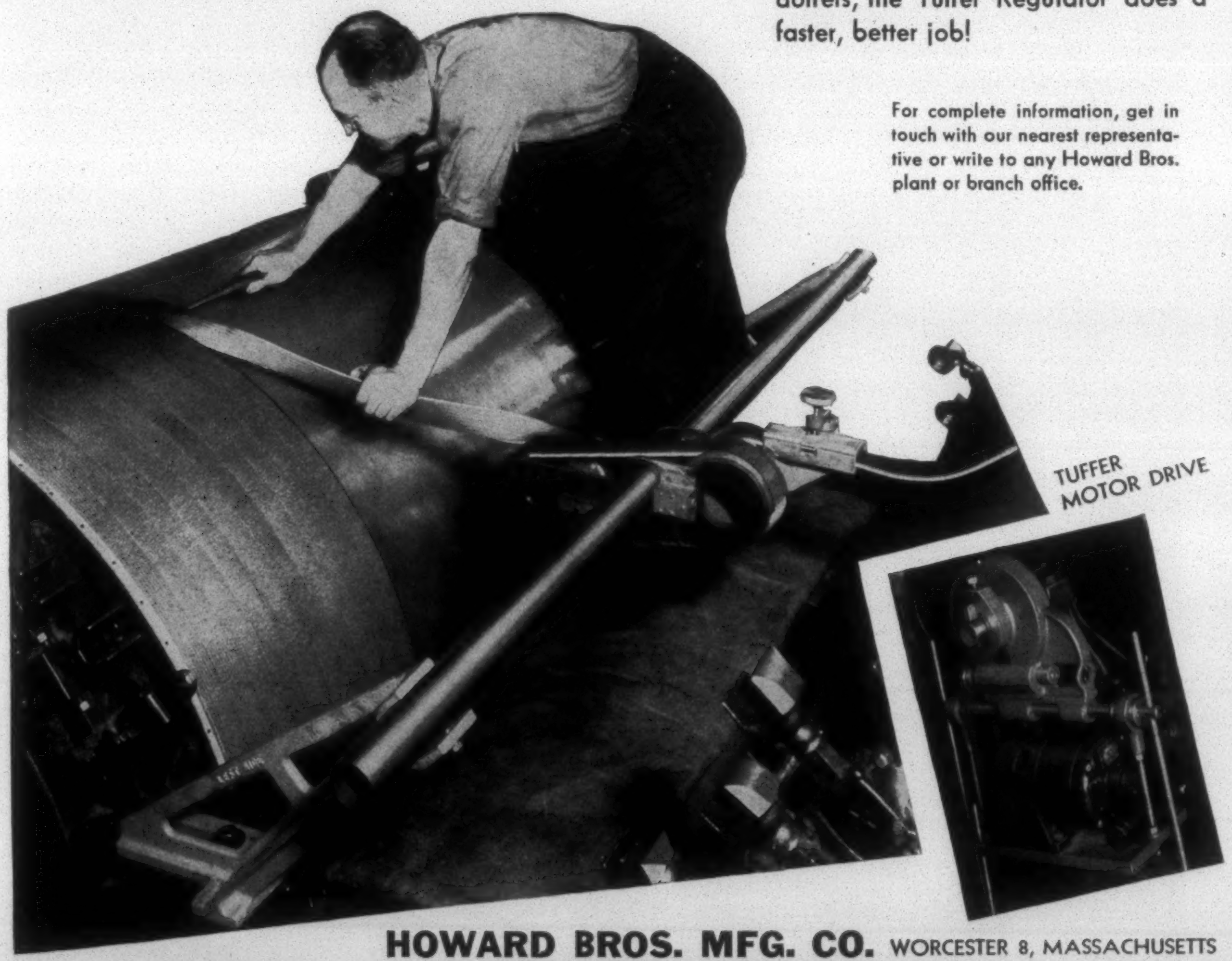

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so rigidly controlled that there are very, very few items, and those items are not the ones that provide the greatest degree of vitamins or of calories.

I think most of us—I am sure that all of us in our mission—just judging from the casual comments which were made, were feeling the pangs of hunger in a strange sort of way. Not that we couldn't go into the dining room and eat, but the consumption of the food didn't quite do the trick. You were still hungry and didn't want to eat! And it has been established scientifically that the stamina of the British workman has been greatly reduced and workmen who ordinarily would go through eight hours a day without any difficulty whatever, were being tired now—beginning to feel weary, by 11 o'clock in the morning.

That simply shows how desperately England is trying to recover her world position through the process of meeting an unfavorable trade balance by forced expansion of exports and by forced reduction of home consumption. I think it is awfully surprising that under these circumstances England has become what is known as a Socialist country. In this country, you know, that label indicates approach to a Communistic country. I believe that all of us were satisfied that the British are bitterly opposed to Communism and every time we raised the question over there, we certainly did get a very violent reaction. They said, "No, we'll have nothing to do with Communism; America will go Communist before Britain will; we'll have nothing to do with it."

They look upon their Socialistic program merely as a device for taking over certain particular industries in England which the public feels have not been operated with as high a degree of efficiency as they should, beginning, of course, with the coal mines, and I think there isn't any question about it starting with the coal mines. They expanded their Socialistic program to include transportation and the public utilities and petroleum.

Now, on an open question as to whether the party will nationalize iron and steel, some say yes, some say no. I think the events of the next few months will determine that. All the cotton people we talked with were very definite and determined in their belief that Socialization would not extend to cotton textiles. Mr. Harry Wilson, who spent a great deal of time talking to the president of the Board of Trade, certainly took the position that England would never socialize the cotton textile industry unless it became a matter of absolute necessity because they recognized it was a kind of independent entity and simply could not be operated successfully in world competition by any government bureaucrat.

I feel a great deal better about England's relationship to the ideology of the continent since this trip. I think they are people who are sturdy, who still have a tremendous amount of stamina, who are devoted to the democratic patterns of the past and who will give them up only under the most bitter necessity.

The textile industry in England will not recover rapidly. As I told you before, there is only about 60 to 65 per cent of the single shift capacity in operation now and the British are groping and trying to find a way to build up that production. Without hoping too much as to the outcome, I think at the present time they are laying their chief hope on what they have come to call redeployment of labor.

I didn't hear Mr. Callaway yesterday and in his report he probably described that all to you but, anyway, they are trying to break the straight-jacket imposed upon them in the past of limitation of the work of the individual and limitation of manpower productivity. Make the utilization of labor more flexible, more scientific and then, as they can, of course, bring in the new machinery—that will be a slow process and even the offer of the government to subsidize the machinery up to 25 per cent, has not yet made it possible to do very much about it—only in particular spots and under particular management, because of the great scarcity

Seated at the head table during the annual banquet Friday night, first row left to right: B. F. Berman and Mrs. Berman; C. M. Elrod and Mrs. Elrod; E. J. Neal and Mrs. Neal; Hearne Swink and Mrs. Swink; Claudius T. Murchison; Mrs. Roy Cheney and Mr. Cheney; Mrs. Rhea Blake and Mr. Blake; Mrs. Charles C. Hertwig and Mr. Hertwig; Mrs. William P. Jacobs and Dr. Jacobs. Second row, left to right: Walter Montgomery and Mrs. Montgomery; J. Craig Smith and Mrs. Smith; Harvey Moore and Mrs. Moore; A. L. M. Wiggins; Fuller E. Callaway, Jr. (standing), and Mrs. Callaway; Ellison S. McKissick and Mrs. McKissick; Charles A. Cannon; Mrs. W. Ray Bell and Mr. Bell; Mrs. George S. Harris and Mr. Harris.

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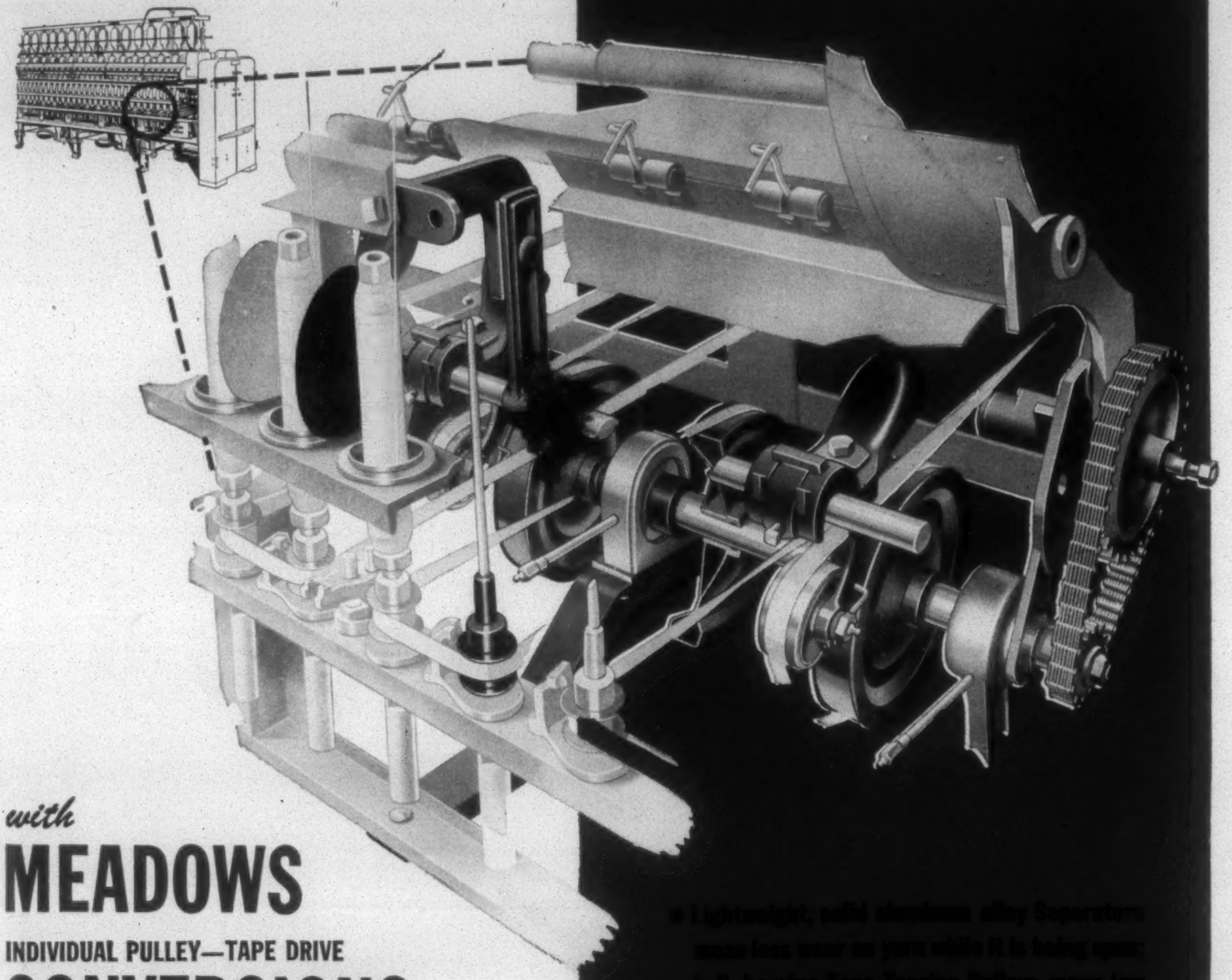

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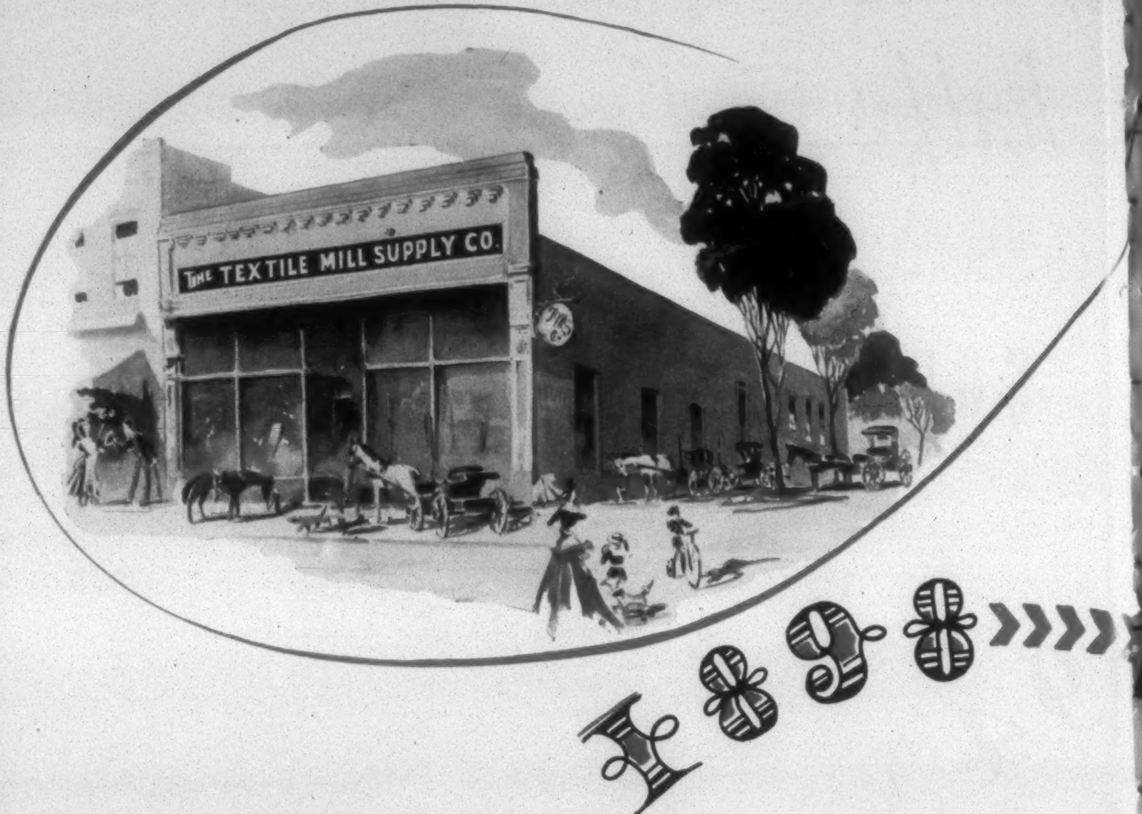
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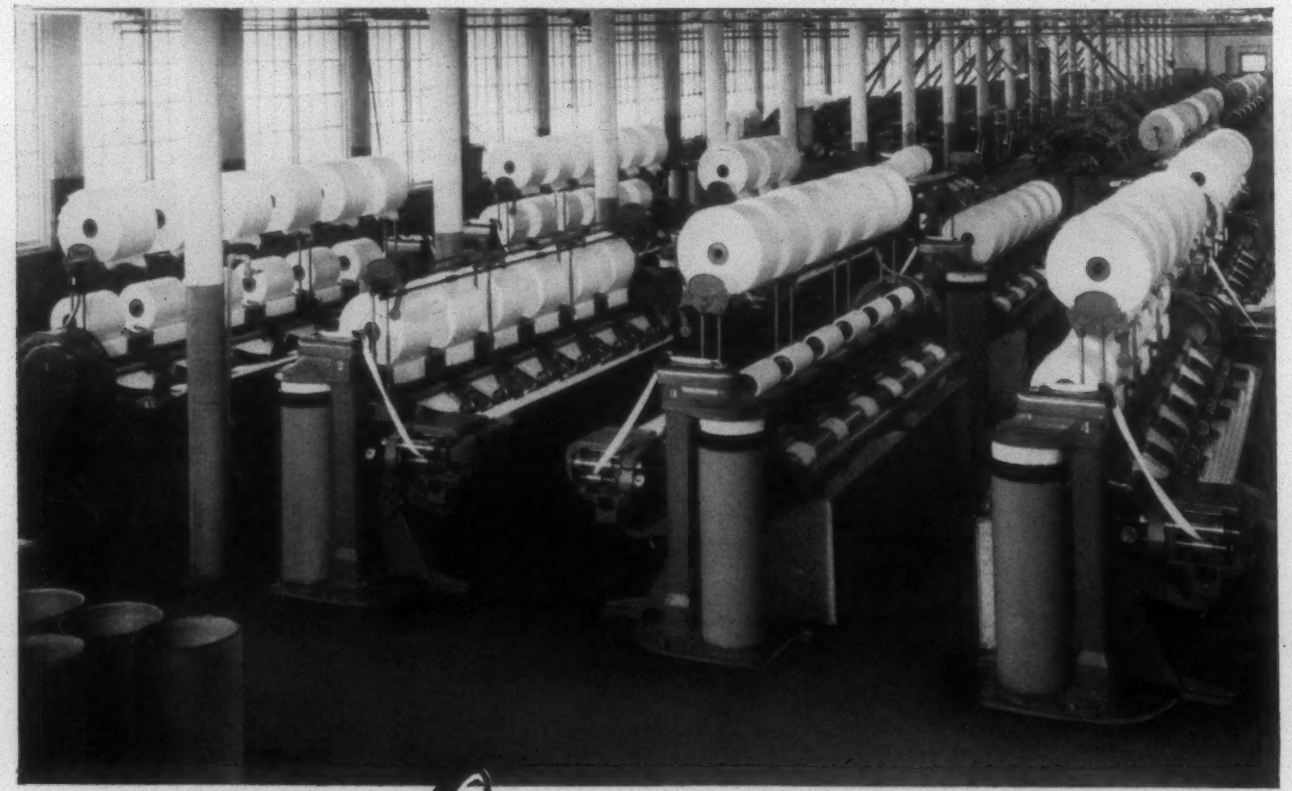

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of machinery in England and the need of exporting to the greatest possible degree, rather than using it at home.

In conclusion, I would say that we have much in common, the United States and England. If we haven't; then there isn't anybody else we have anything in common with, that is sure. The historical traditions, the common institutions, the common ways of looking at things, naturally bring us closer together in economic relationships between our two countries. I feel that the flood tide of Socialism in England has reached its crest, unless some other great emergency comes along, and unless there is another great war, I think from now on we will see the recession of that tide and these two nations will emerge once more the leaders of the world in prosperity and in democracy.

Ward Delaney

IF you are to understand the importance of research, you should know what research means—very few people do—and I would like to help you understand it, its obligations, and its meaning.

What is Research?

Dictionaries call research "careful inquiry," "diligent investigation." The National Resources Planning Board in its exhaustive study of industrial research found *definition* a problem, and termed it "organized and systematic search for new scientific facts and principles which may be applicable to the creation of new wealth and presupposes the employment of men educated in the various scientific disciplines."

Definitions alone won't serve our purpose. Let's look at research functionally. Research is scholarship applied on the frontiers of knowledge. It is a patient, painstaking effort to understand the environment and materials around us. Often research leads merely to interesting results or data which lie dormant until other factors, such as the economic situation, availability of raw materials, consumer demand, or special needs (for instance, a war or national emergency), force commercial development.

Industrial research depends heavily on the store of scientific information gathered painstakingly by thousands of investigators over many generations in the past. This knowledge is in the reference books and in the experiences of scientists. It is a reserve to be drawn upon when needed. That is why the scientific library is important. But there are many fields where the background reserves have been used up or never been developed. It is almost pointless to struggle with a new practical development in such a field; here is where new knowledge should be sought, preferably without thought of immediate gain. This type is fundamental or pure research, a search for scientific truth.

Research is the exploration of an unknown area; at stages, markers are set down so that those who follow will have an easier path. An announced achievement is frequently only a marker at the end of one period of exploration. The public, reading a newspaper account of a research achievement, considers the job done. But a long and expensive road to commercial and economic lies before it.

Research requires extraordinary patience and precision. Men who work in laboratories must anticipate repeated failure or partial success; the goal is always just beyond. Horizons constantly move forward. Rather than think of a research program as something of a gamble, some people prefer to consider that a given amount of money should buy tangible results measured in terms of yards of cloth or new machinery. They are sometimes disappointed. Research costs cannot be carried on the books in the same way as a tangible commodity is carried.

What Are Research Results?

The results of research are primarily ideas. These may be in the form of a table of figures, such as primary physical data; or the result may be a formula for a material coating or a drawing for a piece of equipment. In nearly every case the end result is reduced to words and figures on paper. A laboratory ships little in and usually destroys the materials with which it works. Its reports are full of meaning and need to be taken seriously and interpreted by persons trained in science as well as industrial application.

Today scientific advances are brought to fruition mainly through group effort, for science and invention do not flourish in isolation. Suggestions and stimulation are needed from fellow workers. But there are even more compelling reasons for group effort. The complexity of modern science inevitably leads to specialization; contact between the laboratory and the mill now demands trained, highly skilled specialists in large numbers. Supporting industry forms groups to finance and divide the cost of such group research.

The physicist calls upon the organic chemist for new materials created to meet predicted physical properties; the chemist upon the engineer for aid in designing process equipment; the engineer in turn looks to the physical chemist for help in charting the course of reactions; the physicist and physical chemist turn to the textile engineer and the chemical engineer for guidance in adapting new raw materials or improving established materials within the framework of practical mill practice. No one person can be skilled in all these special fields of knowledge, so the contribution of each person is like the component parts of an intricate jig-saw puzzle.

Group effort means more than a collection of men and women in one laboratory seeking to perfect parts of a research development. It means co-operation, teamwork, and understanding at every stage from laboratory worker to mill superintendent.

There is too common a notion that research is a means of accomplishing any objective at any time merely by spending money for salaries, equipment and housing. This is far from true. Sound ideas and clear definitions of the problems precede any possible program. In addition, trained men, money, patience, courage, facilities and times are all necessary elements of the research requirements of any industry, particularly one of the age and complexity of the textile industry, where so little has been done. Finally, there is nothing glamorous about research. It is cold, calculating, prosaic, hard, unrelenting effort, and often unrewarded.

Let's Look at the Textile Industry

From a detached, objective point of view, the textile industry is a vast, sprawling, fiercely competitive industry, extending from Maine to Florida. It deals in an essential commodity. Like many other industries, it has tried to operate secretly, but the secrets do not keep. With a volume of products reckoned in astronomical figures, with quantities of ingenious machinery which its operators want to improve, with the desire to speed up operations and reduce costs, with the necessity for improving products and eliminating waste, and above all, with a demand for spectacular innovations in products, the textile industry must have research to obtain its objectives.

There is another side to the picture which emphasizes the need for scientific research. The researcher asks: "Why do you use this particular mechanical arrangement?" The answer is not clear to him. The researcher asks: "What are the physical properties you seek for this product?" No answer can be given. The researcher asks: "What is the purpose of this treatment?" He receives a different answer from each operator.

It is immediately apparent that there are here, as in other fields of endeavor, two points of view: That of the production man who is concerned with the continued flow of goods, maximum production and minimum interruption for either experiment or innovation; and that of the research man who is indifferent to the economics of the moment but is concerned with a likely innovation, perhaps merely an improvement, or, at the other extreme, a radical change.

In the philosophy of research, only the experiment can have meaning; to the superintendent of production, only the uninterrupted flow of an acceptable product is important. The two viewpoints are at the heart of research planning in the textile industry. Problems suggested by the production men are apt to be in the category of inspection devices, recording instruments, etc. The scientist, with a different view, thinks ahead to new properties of fibers, new uses, to an analysis of performance of textile materials, to a study of the physical properties of single fibers and of the yarns they make, and why they are made as they are, why they perform as they do. Both are right, each in his sphere, but common ground must be found, and is being found.

The questions the research man asks are important. He is analyzing what appears to be obvious, but is not, one of the truly sound approaches to improvement through research. The importance of research to the industry is so well recognized by many that it seems unnecessary to emphasize it.

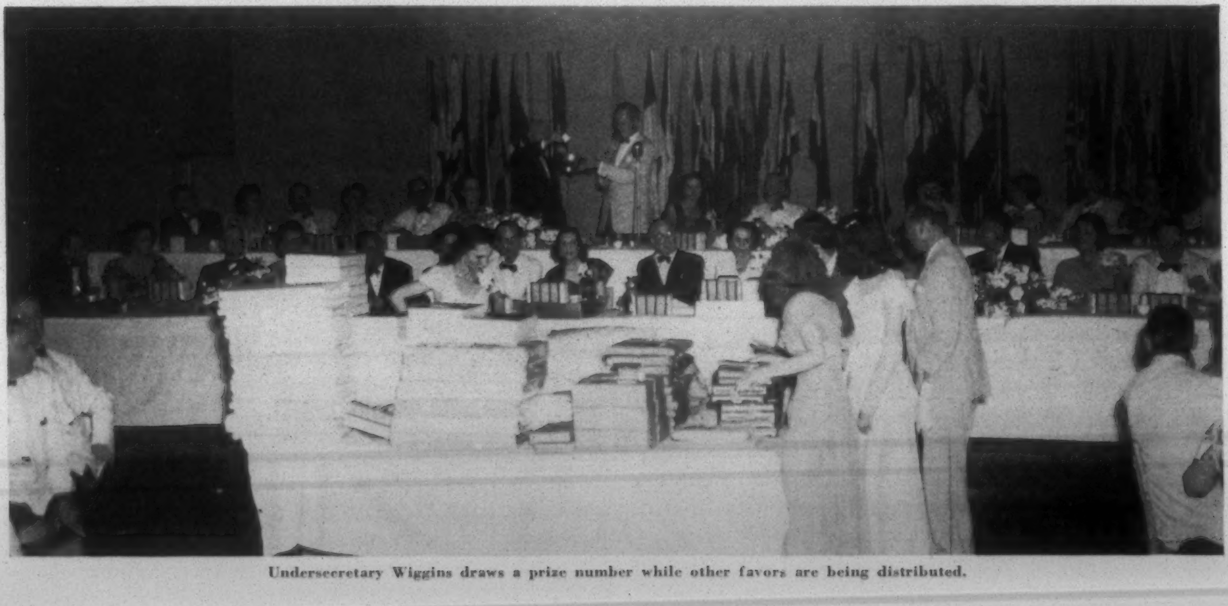
In their annual financial statements, more than half of the companies listed on the stock exchange give space to research programs and expenditures. Many banks show a lively interest in research programs of their borrowers. Keen business analysts know that a well organized, productive research division indicates that the company has given thought to the future needs of its industry.

A glance at the figures, however, points up the fact that the textile industry spends less money on research than any other important industry in America except leather, and it ties with leather for last place in a list of 26 industries in expenditures for research. This is not exactly a flattering comparison. The list of processing industries is prepared by the Federal Trade Commission and appears in the Economic Almanac:

Expenditures in cents per dollar of sales:

Industry	*Rank*	*Ratio*
Chemical	1	1.16
Glass and glassware	2	1.15
Plastics	3	0.85
Rayon, allied products	4	0.70
Clay products	5	0.61
Soap, cottonseed products	6	0.55
Paints and varnish	7	0.45
Rubber products	8	0.39
Corn products	8	0.39
Petroleum refining	9	0.38
Wallboard, building insulation	10	0.37
Paving, roofing materials	11	0.36
Gypsum products	11	0.36
Furniture	12	0.34
Paper and pulp	13	0.29
Lumber	14	0.23
Cement	15	0.22
Woolens and worsteds	15	0.22
Cereal preparations	16	0.17
Fertilizer	17	0.13
Canning	17	0.13
Flour milling	18	0.11
Malt brewing	19	0.04
Textile dyeing and finishing	19	0.04
Leather	20	0.03
Cotton textiles	20	0.03

It is apparent that this industry as a whole is not recognizing the importance of research, but which phase of the industry is to blame is not clear. Some of you might say that statistics such as these are merely statistics, but they are more than that. They are the reflection of the future eco-



Undersecretary Wiggins draws a prize number while other favors are being distributed.

nomic health of your industry. They should be kept constantly in mind, for they show progress in comparison with other industries.

The importance of research to the industry is no different in many respects from the importance of insurance—few are without, yet it is the experience of all which determines the rate each enjoys. How can you tell what research can do for you? You can't, and no one can honestly promise you specific returns.

What can be done about the situation? In my opinion, there are three steps that can be taken: first, make a survey of the amount of research now going on in the textile industry; second, decide what research agencies you want to support; and third, make up your minds how much research is worth to you and make adequate provision for the research program needed to insure the future of the industry. Let us consider each of these suggestions separately.

First, there has never been an adequate special study of the amount of research now going on in the textile industry or by what segments. Perhaps a survey could be made by the trade associations. The associations could learn the facts about the industry, for such a survey would point up clearly where concentration might be encouraged in order to equalize the distribution of funds and to enable each mill to carry its share of the cost. Any information about research in the field of textiles would be enlightening. What is important is the effort to find out about ourselves, about our health as an industry. We need facts!

Second, the textile industry should give thought to the number of research agencies to be supported. There are many endeavoring to serve you. Which are the ones you should support? Support all of them if you can and they all serve your needs. There is no competition in research itself, but only in the application of research results. If you cannot support all of them, how can you evaluate the one you can afford? Only by measuring the intelligence of its leaders, the quality of its staff, the adequacy of its facilities, and the soundness of its program. All sound research organizations would welcome such an investigation.

Third, how much is research worth to you and what provision has been made to revitalize your business by having trained scientists constantly on the alert for new facts applicable to your business? The most progressive industries in the country are striving to use all available research facilities. They are putting part of their earnings back into the industry to get larger yields. The textile industry could well allocate or build up reserve funds to take care of research programs now as never before. Competitive industries are going right ahead with research, and if textiles lags, time will bring obsolescence and declining revenues.

If you decide to support research, especially on a co-operative basis, the future of textiles is unlimited. It is time that textiles, a giant among industries, re-examined its processes, products and budget, and took advantage of this extraordinary period of scientific development.

I think I can safely say that the accomplishments of other industries can be paralleled in this one. The time required will be determined by the broadness of the attack; the results accomplished will be determined by your co-operation, and you can afford research now as never before in your history. How important should research be to you? Not any more or not any less than to any industry which expects to stay in business.

A. L. M. Wiggins

WARS have always had a severe impact on the economy of the participants. From the Revolutionary War to World War II and all that came between, during and following every one, there was a demand for goods in excess of production with a resultant rise in price levels and a resultant adjustment in the economy. Since our entry into World War II and particularly since V-J Day in August, 1945, businessmen, financial men, and economists have undertaken to analyze and to forecast the probable adjustments that might be expected. The batting average of these opinions has not been good.

Following V-J Day, it was expected that our economy would take a deep plunge during the readjustment from war production to peacetime production. In order to facilitate the transition, many wartime controls were quickly dropped, taxes were reduced and preparations made for serious unemployment. However, the adjustments were made more quickly and more easily than the most optimistic believed possible and unemployment failed to develop. Some of the wartime controls were dropped too quickly in the light of price rises that promptly developed.

There were and there continued to be two schools of thought. One believed that the post-war pattern of our economy after World War II would follow the pattern after World War I. They generally predicted that the country would suffer a serious recession, commencing in the Spring of 1947. Even when this did not happen, they became more certain after the break in the commodity markets in February, 1948.

Another school of thought believed that World War II had been so different from any of its predecessors that it was likely to be followed by an entirely different sequence of economic events than had followed World War I. They point to such disturbing world events as the recent Communist coup in Czechoslovakia and the militant drive of Communism throughout the World. Thought today, both among economists and practical businessmen, is still oscillating between those two points of view. I believe that—as is so often the case in the real world—the truth lies somewhere between the two extremes. Just where this mean may be is a question of utmost significance for practical businessmen.

I do not pretend that I have the answer to this question which is so much in every businessman's mind. But, in order to give you the benefits of my own thoughts on the subject, I would like to take you on a short tour of the economic situation and of the international political situation, pointing out some respects in which the current situation resembles that of 1919-1920 and in what respects it differs from it. I have selected the period after World War I that most nearly compares with the present.

Let us start with the international political situation. I do this, not because I have any new contribution to make in this field; but because, in my opinion, events in the international field will, more than any others, determine what happens to domestic business.

The Communists have for years preached the economic interpretation of history. They have told us for generations that economic events determine political events. That is what they say. But, in the course of two or three years of concentrated action, they have done an extremely effective job of teaching us just the reverse. As far as today's march of events is concerned, world politics determine world economics, and not the reverse.

There is no economic reason why the world should not be at peace. There is no *economic* reason why we should have to spend 15 billion, or ten billion, or even a billion dollars a year for national defense. There is no *economic* reason why Russia should spend a far larger share of her national product than we do for this same purpose. The reasons are entirely political; they are based solely upon the insatiable desire of the Soviet Government for world domination.

The drive behind this desire is the great unknown in the domestic business situation. If this drive for world domination is so strong as to put and to keep the United States on a quasi-war basis, all comparisons with the post-World War I sequence of economic events are pointless. It is under the shadow of this great doubt that we proceed with a comparison of the economic situation now and in 1920, and an analysis of the present-day significance of the post-World War I pattern.

That I find it worthwhile to proceed with this analysis at all, and that—I hope—you find it worthwhile to follow me in it, are tributes to our faith that ordinary everyday common sense will triumph, even over the intricate dogmas of Communism; and that the men in the seats of authority in Russia will ultimately find it more worthwhile to build up their own system than to try to tear down ours.

And so we proceed with our economic tour. Back in our own home waters, the first scene which it seems worthwhile to survey is the role of government in our country. In the calendar year 1920, the total expenditures of the Federal Government were equal to only six per cent of the national product. For the calendar year 1947, the corresponding percentage was 18. Part of the explanation of the high 1947 figure is, of course, the unsettled international situation; but a great many large government expenditures are here to stay, irrespective of events abroad.

This expansion in the role of government is an important factor in our economy today that existed only to a minor degree in 1920. A further expansion could make our system less productive, more rigid, and less adaptable to new wants. But, looking ahead over the next few years, it is apparent that the greater role of government in the economy today—and the stable, and even anti-cyclical, character of government operations—is evidence on the side of expecting a more stable level of business activity in the years ahead than was the case in the years which followed 1920.

This greater role of government weighs heavily on our interpretation of many other economic series. The Bureau of Labor Statistics' index of consumer prices has advanced about 68 per cent from its 1939 average, as compared with an advance of about 108 per cent from the 1914 average to June, 1920. The bureau's index of wholesale prices has advanced about 108 per cent from its 1939 average, as compared with an advance of about 145 per cent from 1914 to June, 1920. Prices of industrial products have advanced much less than in World War I, but farm prices much more—180 per cent for the present period as compared with 135 per cent in the former. We well remember that the downturn in farm prices was one of the first signals of the 1920 break. We had our memory jogged on this point last February. But, here again, the role of government enters in the form of support prices for agricultural products. Nineteen hundred and twenty can hardly be expected to repeat itself here.

In yet another respect, far removed from government intervention, the agricultural situation is now vastly different than it was in 1920. While the prices of farm real estate have advanced even more rapidly during the past few years than during and after World War I—by 102 per cent from 1939 to 1948, as compared with 75 per cent from 1912 to 1920—this rise is very different in two particulars. First, the World War I rise came on top of a protracted rise in the previous decade. The World War II rise, on the other hand, has been largely a recovery from the depressed market of the 1930s. Second, and perhaps more important, the World War I rise was accompanied by an increase of about 160 per cent in farm mortgage debt, while the World War II rise has been accompanied by a decrease of about 30 per cent in such debt.

Based on the same principles which a banker would use in reading the balance sheet of an industrial concern, agriculture is in a sound position today. The consolidated balance sheet of all agricultural enterprises in the United States as of Jan. 1, 1947, as estimated by the Department of Agriculture, shows total assets of about 111 billion dollars and total liabilities of about eight billion dollars. There are no corresponding figures available for the 1920 period, but we do know that farm mortgage debt has been cut in half during the last 25 years.

Returning to the general subject of commodity prices, one of the primary causes of the rise in prices which characterized both war periods was the great increase in the money supply. The money supply, defined as currency outside of banks plus adjusted demand deposits, increased about 104 per cent during the period from 1914 to 1920, and about 230 per cent in the period from 1939 to 1948. Based on the increase in money supply alone, therefore, one would have expected a greater relative rise in commodity prices in the second war period than in the first. But, as I have already pointed out, the reverse is actually the case—the increase in both wholesale and consumer prices from 1939 to the present time being less than that from 1914 to June, 1920.

The difference in the money supply situation now and in 1920 is worth looking into further. In the first place, we have more money relative to our volume of business now than we did then. In 1920, we had about 27 cents in money supply for each dollar of the gross product; now, we have about 46 cents of money for each dollar of product. Businessmen and customers alike want to play their cards closer to the chest than they did a generation ago. We like to have more money in the bank and more money in the till before we go ahead now than we did then. Whether or not this increase in the conservatism of the American people has been great enough to absorb the entire increase in the money supply, only time will tell. But it can be said with reasonable certainty that today's money supply goes much further toward supporting and sustaining today's prices than the 1920 money supply went toward supporting 1920 prices.

So much for the difference in the amount of the money supply now and in 1920. It is also very different in kind. In both wars the increase in money supply was brought about partly as a result of financing the government deficit and partly as a result of financing an industrial expansion. But there is a big difference in the proportions. The expansion of the war industries in World War I was largely financed by the issuance of their own securities and by their own borrowing; whereas in World War II, it was financed principally by the government. As a consequence, a much larger proportion of the money supply in 1920 was backed by the private loans and investments of banks than is the case today.

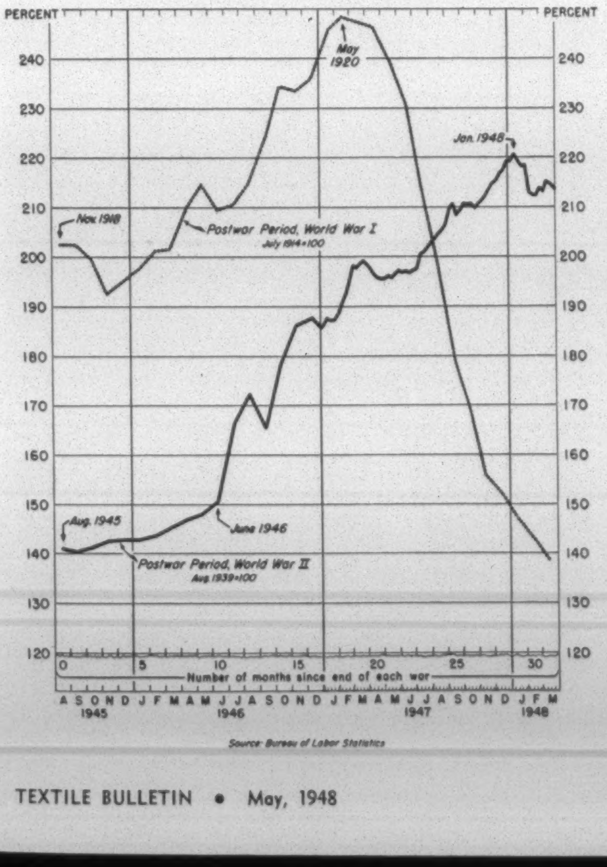
In 1920, private debt constituted 80 per cent of all debt, whereas today private debt is only 40 per cent of all debt. In 1920, United States securities accounted for only about 11 per cent of the total loans and investments of all member banks; while today they account for nearly 60 per cent. This means that the money supply—and the whole economy—is much less vulnerable today to the type of loan contraction which swept the country in 1920 and 1921 than at that time.

The discussion of money supply brings us back again to one of our central themes in the comparison between now and 1920—the changed role of government. In June, 1920, the Federal Reserve ratio was about 41 per cent, and the Federal Reserve authorities took it for granted that this required a drastic deflation in member bank borrowings—which then amounted to between 2½ and three billion dollars. Today the Federal Reserve gold ratio is about 51 per cent, and member bank borrowings are only 68 million dollars. But, much more important, our whole attitude toward the significance of figures of this type has changed.

It is no longer considered proper or necessary to liquidate the economy because of a low or declining Federal Reserve ratio. If the economy were otherwise sound, a change in the reserve requirements of the Federal Reserve Banks by statute would be considered a more appropriate remedy. These requirements actually were reduced from a figure of between 35 and 40 per cent—depending upon the relative amounts of currency and member bank reserve deposits in the liabilities of the Federal Reserve Banks—to 25 per cent—irrespective of these proportions—in June, 1945, when the war was still going on and it seemed that the old ratio might be violated.

WHOLESALE PRICES IN TWO POSTWAR PERIODS

Level at beginning of the war in each case = 100



Source: Bureau of Labor Statistics

Next to the change in the international situation, this changed attitude with respect to the role of government in our economy is probably the greatest change between 1920 and now. The country now expects the government to sit on the high side of the boat; and government now undertakes to keep the boat steady—with varying success.

The next point on our tour is corporate profits. The Treasury Department has estimated, in its testimony before Congressional committees, that in the calendar year 1947 corporate profits after taxes amounted to about 19 billion dollars. This is an increase over 1939 of a little over 200 per cent. In 1919—the best profit year in the period immediately following World War I—corporate profits after taxes amounted to about six billion dollars, an increase as compared with 1914 of only about 60 per cent.

The economy has so grown during the intervening period that a comparison of dollar profits now and then is almost meaningless. But there is one pair of figures that sticks in my mind. In 1919, corporate profits after taxes amounted to 8.1 cents for every dollar of the gross national product; in 1947, the corresponding proportion was 8.2 cents for every dollar of product.

The amazing similarity in the proportion of the national product represented by corporate profits in these two good years—28 years apart—is a fact to be conjured with. It is equally sobering to those who say that corporate profits have run off the track in their excessiveness, and to those who say that the "good old days" have gone forever.

However, in 1921, net corporate profits disappeared completely. The fact is, of course, that corporate profits are one of the most flexible elements in our economy, and must be expected to be high in good years and low in poor ones, both in absolute amount and as a proportion of the total product.

Corporate profits are, of course, much higher in some lines than in others. A tabulation published by The National City Bank of New York, in its April review of economic conditions, shows that 3,102 leading corporations in all lines of activity earned an average return of 12.2 per cent on their net worth in 1947. Of the 70 lines of activity for which the bank made separate compilations, the highest return on net worth was in the cotton goods industry, where this return was 36.1 per cent.

I have said that corporate profits are one of the most flexible elements in the economy, and profits in the cotton textile industry are more flexible than most; but there are some who think this is carrying flexibility a little too far. The cotton textile industry has had more than its share of boom and bust—profits in cotton goods manufacturing fell by about 87 per cent between 1919 and 1921—and it may well be a proper time now for cotton manufacturers to consider pricing policies more in line with the permanent preservation of their markets.

As you know, the stock market views the current earning rate in the cotton textile industry with a good deal of skepticism. The stocks of some of the best companies in the industry are now selling at only two or three times 1947 earnings. Such skepticism runs through the entire market, although in less extreme degree. The prices of common stocks, as measured by Standard and Poor's comprehensive index, are up only 31 per cent from their 1939 average, despite the great increase in corporate profits and in the replacement value of the underlying plants. The 50 industrial stocks included in Standard and Poor's daily index are selling, on the average, at only eight times their 1947 earnings.

The increase in stock prices in the World War I period was even less. Stock prices then reached their high for the entire war period in 1916 before the United States entered the war. The average for 1919—the highest post-war year—was only about four per cent above that for 1914; and the average for 1920 was about seven per cent below 1914. Nineteen hundred and twenty stock prices, like those of the present time, represented a conservative evaluation of current earnings.

It may reasonably be concluded, then, that the stock market was not a focal point of weakness in the economy at the time of the 1920-21 recession, and that it is not now. In both cases, stock prices have failed to reflect the full current level of corporate profits. This is quite the reverse of the situation in 1929, when the market was reflecting an expected sharp rise in profits; so that even leveling off of profits would have likely precipitated a stock market crash.

I come now to the field of urban real estate. I have had the distinct impression that this is one field more vulnerable at the present time than it was in 1920. We know, in the light of the outcome, that the urban real estate market was one of the least vulnerable elements in the 1920 situation. It is extremely disconcerting to read such statements concerning the present situation as that in the March *Federal Reserve Bulletin* that, ". . . The increase in mortgage indebtedness on one to four-family residences, for example, has been estimated at 5.5 billion dollars for 1947, almost a billion more than the 1946 growth and five billion more than that for 1945. Mortgage indebtedness on this type of housing has increased during the past two years by an amount greater than new construction expenditures on such housing. . . ."

It is difficult to compare the urban real estate situation now and in 1920 because of the lack of reliable data covering both periods. Different indices of building costs, for example, vary widely among themselves; and perhaps all fail to reflect the actual results realized on the site. Nevertheless, it is interesting to note that the indices of building and construction costs compiled by the *Engineering News-Record,* by the American Appraisal Co., and by the Associated General Contractors, all show a smaller increase since 1939 than occurred between 1914 and 1920.

According to the best estimates which we have been able to obtain, total urban mortgage debt increased about 50 per cent in the eight years ended with 1947, as compared with an increase of about 40 per cent in the four years ended with 1920.

One of the considerations of present urban mortgage debt is the long arm of government. It has been reaching out into the field of guaranteeing mortgages, with the possibility that the Treasury may eventually be rapped on the knuckles. But such an outcome, however unfortunate, would, in any event, ameliorate the situation from the standpoint of individual mortgagees and, to a lesser extent, individual mortgagors.

Among the favorable factors, it may be argued that monthly payments, low interest rates, and long amortization periods on most existing mortgages will make them easier to bear. But I do not find that any of these considerations are able to erase from my mind the impression given by such statistics as those on the relationship between the increase in mortgage debt and new construction which I cited earlier from the *Federal Reserve Bulletin.* Taken all in all, it appears to me that the current urban real estate situation is perhaps one of the weakest elements in today's economic picture.

The gross public debt of the Federal Government is more than ten times as great as in 1920. This is more than the

A section of the happy gathering at the annual banquet.

national gross product in 1947. It constitutes about 60 per cent of the total of all debt, public and private, in the United States. The management of this debt imposes upon the government the necessity of controlling interest rates, not only in the interest of the government itself but in the interest of our national economy. Every change in interest rate has its impact on the financial and credit structure. It is reasonable to expect that the management of this debt and the control of interest rates which such management gives will be conducted in the interest of the stability of our economy.

Fiscal policies of the Federal Government, budgetary management and changes in our tax structure are also important elements in our national economy. They constitute a large field of discussion, which my time does not permit.

A factor of tremendous importance in our economy is the total of liquid assets held by individuals aggregating approximately 200 billion dollars at the present time. Of this amount, nearly 150 billion dollars has been accumulated during the past eight years. Of this total amount, 67 billion dollars represents individual holdings of United States Government securities.

When we summarize all of the facts and factors and our present economic situation as compared with 1920, we discover:

That there are basic elements of financial and economic strength in our economy today that proportionately can sustain a higher price level and a higher production than could be sustained in 1920. In addition, there are fewer weaknesses in our price structure and in the credit structure than in the former period. These facts do not necessarily mean that both prices and production may not decline. They do indicate, however, that if prices do not increase above current levels and if our credit structure does not become weakened, prices are not likely to suffer the precipitous drop that occurred between May, 1920, and June, 1921.

Another important factor that was only slightly present in 1920, but now has assumed large proportions, is the substantial control of industrial wages by organized industrial labor. We may reasonably expect a strong resistance to any serious decline in wage levels.

I do not mean to say that we cannot expect price adjustments in the years ahead and the likelihood of price reductions in many lines. As production and demand come into better balance, price adjustments are inevitable. At the moment, the task is to hold the line on the inflation front and to prevent further rises that might eventually result in too costly readjustments.

I believe it is possible to attain that objective, provided there is proper restraint on the part of business, of finance, of labor, and of government. To pursue any other course may endanger not only our private enterprise system but democratic government in this country as well.

Donald Comer

WHEN Walter Montgomery asked me to go with Dr. Jacobs as a member of a three party textile mission to Japan I was glad to accept. I felt there might be an opportunity to be of some service to the industry because of a former trip as a member of the Murchison Mission to Japan in 1937, which resulted in a voluntary quota acceptance by Japan for shipment of her cotton goods to our home markets. This gentleman's agreement was in force when the war came.

In Washington—talking with the Army the day before we were to leave—I found out for the first time that the Army had for some months been telling our industry that Japanese goods were going to be shipped to America. I had no idea that this question was so immediately pressing. In discussing the matter with Secretary Draper he was unwilling to promise that sales and shipments to America would be held up until the investigation and report of our mission. We asked if S. C. A. P. were planning a quota on such shipments of Japanese goods to America and his reply was that any quota arrangement would be against the law.

An article in the *Journal of Commerce* the day before we left provided Senator Maybank of South Carolina with a chance to bring this matter out in the open in a statement before the Senate. Senator Maybank's statement, supported by Senator George and Senator Hoey, was very encouraging to us and as a result we went on our way with considerable hope.

We spent several days in Washington and during that time representatives of all groups interested in this question of Japanese goods came to visit us. We had the benefit of helpful suggestions from Harry Bailey, who had been to Japan last year and who was with the Murchison Mission in 1937. Dr. Murchison himself came down. We talked to exporters and to the National Cotton Council people.

Those who have been to the Orient since the war, on the invitation of the Army, are familiar with the inoculations and medical examinations that are required before you leave this country. Your three members were inoculated against typhoid, typhus, small pox and cholera all in the same morning and we had to have follow up inoculations two other times enroute. We were briefed in Frisco against an accident at sea, "ditching" they call it, when the plane is forced down. By moving picture we were made acquainted with an actual ditching program. We saw the passengers put on their Mae Wests; we saw the rubber life rafts being thrown overboard, the passengers following as best they could. We were instructed what to do and not to do for the one or many days we might find ourselves adrift. Then when we came out, we were asked the name of our nearest relative to be notified in case of accident. I think Dr. Jacobs, Mr. Symmes and I would have been just about willing for sombody else to have had our job at this stage.

We had a bucket-seat plane to Honolulu but the fact that so many of our passengers were soon engaged in games on the floor of the plane gave us more room on the seats. We were met in Honolulu and escorted to V. I. P. guest quarters and were kept three days waiting for what the Army calls "a plush job" to take us on to Tokyo. We were all impressed with the way the Army handles this transportation matter. The planes leave on time. Of course, on account of weather conditions, they cannot be so regular about arriving. We were impressed with the orderliness of the Army Depot quarters. Here, there and yonder were receptacles for trash, cigarette butts, etc., and a card over the cans read "Hit me or pick me up."

Visiting the Sears Roebuck & Co. store in Honlulu we were impressed by the statement that so many of the Japanese living and working there were buying cloth and sending it to their friends and relatives in Japan. This to some extent accounted for one of our suggestions to General MacArthur that more of the cloth being produced in Japan be made available for use in Japan.

On our trip from Honolulu we had a night flight to Kwajalein. The commanding officer there was up early to give us breakfast. We had lunch at Guam where we noticed that our friend Chip Robert of Atlanta was engineering a contracting job for the establishment and development of an Army base. We were in Tokyo that night at 9 o'clock. General Marquat, in charge of Economic and Scientific Section of S. C. A. P., with other members of his staff, met us and took us to the Imperial Hotel, the same quarters we had in 1937. The first day we had lunch with General and Mrs. MacArthur and General Marquat. The General expressed his appreciation of the mission and we were convinced that he really wanted all the help he could get in his program for reactivating a part of the Japanese textile industry.

During the two weeks spent in Japan each day we had representatives not only from all the Asiatic governments but those who were on buying missions from Hongkong, Singapore, Egypt, the Netherlands and from Belgium in connection with their African colonies.

We spent a good deal of time talking to local people in Tokyo, both American and Japanese. We talked to many Japanese who were not only local manufacturers but heads of trade organizations, particularly the foreign trade groups. We visited cotton mills both at Osaka and near Tokyo.

I think we were all impressed with the fact that we had shipped some rather low-grade cotton to Japan but we were also equally impressed with the fine results that they seemed to be getting from this cotton. Operating conditions in the mills are somewhat different than they were in 1937. The workers are now in organized unions; they are on an eight-hour day and they stop for Sunday. Their wage adjustments upward had been coming rather regularly because of strikes and threat of strikes. Their local money had depreciated. The occupational forces were maintaining a value of 50 yen to a dollar and this in the face of black markets running up as high as 500 yen.

On the streets you saw Japanese women in old-fashioned kimonas beside others dressed in slacks or knee-length dresses with bobby sox. We saw limousines and rickshas; we saw men dressed in Japanese attire walking beside others dressed in regular American clothes. A Japanese talking about these comparisons remarked that the Japanese minds are also just as confused and just as mixed.

A mission could not have had better facilities for gathering information furnished them than we had. Every department with its personnel was available with facts and figures and records. Our office had just a door between us and General Marquat. We had an efficient secretary and when the time came to go home, General MacArthur gave us the last part of his day so we could have all the time we wanted and so there would be no interruptions. You have perhaps seen our full report which was reduced to 16 recommendations. Both General MacArthur and General Marquat were good enough to thank us warmly and express appreciation for what they said had been a very helpful visit and we left Tokyo with the definite impression that the Supreme Allied Commander had no thought of trying to rehabilitate Japanese industry in any way that would really hurt the American textile industry.

General Noland was in Tokyo at this time with his private plane and he took us on as his guests as far back as Honolulu. This time, though, we flew back by Midway Island where the Navy is in charge. We were entertained by the commandant there and given a drive over the island, while our plane was being serviced. The General's plane was called *The Magic Carpet.* I like this name better than a name like *Sacred Cow* and it surely was a magic carpet for us. It had private cooking facilities and beds as well as comfortable seats. As a result of this our 24 hours from Tokyo to Honolulu was the most comfortable part of the whole trip.

Mr. Tate, chief of the textile division of S. C. A. P., returned to the United States with us and aided greatly in helping us explain the Japanese textile situation, both to Secretary Draper and to the Senate group. He was a former student and instructor at Clemson College, S. C.

Of our 16 recommendations we felt that the first and third were almost the heart of the whole list. The first suggesting a $150,000,000 revolving fund is embodied in a bill just introduced by Senator Eastland of Mississippi. It is contemplated that while the fund shall not be limited in its use, the mission felt that Japan should be required to use at least 60 per cent of its cotton from the United States. The mission had constantly in mind the shrinking export demand for American cotton and felt that if American money were to be used for rehabilitation of the Japanese textile industry that it was only right that the larger part of their cotton should come from the United States.

The other recommendation had to do with the establishment of a comprehensive sales organization and Fred Williams, just retired as head of Cannon Mills' sales, has agreed to undertake this job and is now in Tokyo. Mr. Williams was the first choice of our textile mission. We believe that S. C. A. P. will find his help invaluable.

It is obvious that Japan's 80 million people must again go to work. Only a small part of their land is cultivatable —about 15 per cent. There appears no unwillingness to work—on the contrary there is an eagerness. The quicker tools and raw materials are made available the quicker will relief come to the American tax payer.

To start with, three-way trading must be arranged. More Japanese cotton goods in their accustomed place on Asiatic counters would provide incentive for increased production of tin, rubber, coffee, oil, copra, quinine, etc.—things that we need. A question in the mind of the Asiatic "Why work if there is nothing to buy?"

One last word—no mission that I have ever been a part of ever went on a job where there was a more capable chairman than Dr. Jacobs proved to be in this case. We had first to report to General MacArthur when we arrived and again when we left. We had to face members of the press while we were in Tokyo; on our return to Washington we had to make our report to Secretary Draper. We then made a report to a group of Senators gathered by Senator Maybank, and we had to meet the press of Washington. Dr. Jacobs was the spokesman in all of these meetings and I don't see how anyone could have made these reports or answered the questions more satisfactorily to all parties concerned. I am sure Fred Symmes and I were very proud of our chairman in all of these associations and I am glad of an opportunity to say this.

William P. Jacobs

As we gaze into the crystal ball and survey the trends which foretell the future of American textiles, we find that we are entering an era of change. During the war we were engaged in feverish efforts to increase production to the maximum to serve our armed forces and those of our allies, and the major contribution made to victory by the textile industry of America reflects one of the miracles of the modern age.

Following the war there was an equally critical period in which, against misunderstandings and misgivings, we gradually replaced hysteria with sanity and substituted free enterprise for a mild case of national socialism and federal controls. Now we face the future in an era which is destined to force us to replace our provincial domestic attitudes with a comprehensive and understanding world outlook, for whether we like it or not the American textile industry is now elected leader and co-ordinator in international textiles.

Where there is stagnation in production it is our privilege and duty to correct it. Where there is maldistribution of textiles we have the opportunity to rectify it. Heretofore, we have stood complacently by and depended upon our British friends to lead the way in the field of exports. Now we find them leaning upon us and actually seeking American leadership and American products as well as American financing. This new change of trends offers a distinct challenge to an alert industry and it also presents great dangers.

American industry can become too strong, too overbearing, too dictatorial, too greedy in its attitude, and the American government can easily become too free in giving away other peoples money, and too idealistic in breaking down normal trade barriers.

If we approach these international problems with the altruistic idea that we have a responsibility to lead to free trade, our conclusion may be a very pleasing one to those American producers who can withstand world competition, but if the trends toward the lowering of tariff barriers and toward free trade encourage other nations in the world to use raw cotton and cotton manufactures for their major exports for the purpose of securing dollars with which to buy more American capital goods such as automobiles, electric refrigerators and radios and similar items which are protected by patent rights and processes, then it may be a heavenly combination for the capital goods manufacturers and, by the same token, a hellish combination for American textiles.

One basic fact which we must never forget is that in the case of the manufacture of textiles the cost of manual labor represents a higher percentage than in the manufacture of any other major product. Thus the textile industry of America is more vulnerable to the textile industries of the world which have much lower wage schedules than the textile industry of America and is more vulnerable and more severely injured by decreases in tariff walls. It boils down in final analysis to competition between the relatively high-paid textile and farm workers in America, and the low-paid textile and farm workers throughout the balance of the world.

Just as every other nation in the world can make rags and strings, so can practically every other nation in the world produce raw cotton and just as soon as we stop feeding them free of charge, when they get down to the necessity of making a living and actually get back to work, you are going to witness tremendous increases in cotton production throughout the world. Presumably this is just what is happening today behind the Iron Curtain.

The retiring chairman of the A. C. M. A. board of government, Fuller Callaway, Jr., turns over the gavel to Harvey W. Moore, chairman for 1948-49.

If, therefore, it is our national policy to sacrifice the American textile industry and cotton farms on the altar of international trade co-operation, we are going to have a pretty rough time ahead.

If the Economic Co-operation Administration correctly portrays the effect of international co-operation upon American textiles the outlook indeed is disturbing, for this greatly advertised benevolent gesture includes raw materials, equipment and other elements to encourage the building of textile industries in European countries, but it does not include directly any textiles made by the American industry. It is to be hoped that the indirect effect at least will be that of stimulating export markets for American textiles which have, for the past several weeks, been floundering in the doldrums.

Indeed, this whole new one world philosophy would be extremely disturbing for the textile industry of America were it not for the opportunity which the current situation offers our industry to assume world leadership in the textile field.

It is well to remember that history constantly reminds us that the textile industry of America prior to World War II was producing more goods than our home market could consume. A continuation of the present rate of production may lead us into the same situation through the period just ahead. However, most of us were surprised to see the domestic textile market continue strong and prices remain firm for such a long period after the war. This fortunate circumstance was the result of the combined influences of an abnormal export trade, the elimination of superficial controls and price ceilings, the automatic death of the black market, which combination of circumstances returned needed products to accustomed markets.

Incidentally, if there is still any question in your mind about the economic soundness and the social validity of price controls, you should take a trip to England and examine the advanced stages of social and economic diseases which have resulted from too much accentuation on social reform and too long a continuation of controls for there you will not only find garments but most edible foods passed into the black markets, and nothing short of overemphasis of a national emergency, which has touched the hearts of a patriotic and seriously misguided people has prevented serious consequences. Let us hope that our first cousins across the sea will somehow find their way back to an economic sanity which once expanded the United Kingdom and use it as a substitute for the creeping paralysis which today is assuredly retarding its field of operation.

Another encouraging factor which can give American textiles renewed confidence in increased international operations is the realization of the fact that not even the tremendous differences between relatively high wages of the American textile worker and the low wages of the textile workers in the balance of the world, and not even the trend toward lower tariffs, not even the determination of some of our misguided leaders to play the part of world Santa Claus, can overcome the fact that we in America have learned more quickly than anywhere else in the world how to use the machine to multiply the skill of the human hand and the ingenuity of the human mind. In Mexico today the average weaver operates two looms, in South America he averages about four, in England they boast of the increase from an average of six to eight, in Japan, before the war, they were averaging more than 20 looms per weaver and in the United States the average is somewhere between 60 and 100. Therein lies the future of the textile industry of America, for the American weaver who operates 60 looms not only does not work 30 times as hard as the Mexican worker, who operates two, but his task is immeasurably lighter than that of the Mexican weaver, for the American weaver is working with better yarn, with finer machines under the guidance of greater scientific precision, and he is making more of a better product with less effort. There is nothing remarkable about this comparative picture, but there is something that is fundamentally sound.

There is nothing in this that could be called a "stretch-out," as it is erroneously termed by some who are uninformed, for it is a scientific expansion of the productive capacity of the individual and by virtue of this increased capacity he earns more and this is one of the big reasons why the American textile worker is the highest paid worker in the world. The machine helps him to produce more per ounce of personal energy and thus facilitates a decrease in the unit of cost that his superior products scientifically made by mass production effort may earn for him a higher income and still be sold at a lower price in competition with the cheap goods of the world that more people may afford to buy them and thus many more may be employed in their manufacture. This is the American way. The grand American cycle of mass production which even an industry like textiles, in which such a high percentage of the ultimate cost is represented by manual labor, is enabled thereby to compete with the world. I said there is nothing miraculous about this. It is just a scientific utilization of the God-given skills of mankind.

My eyesight is bad. When I put on my glasses, however, I can see perfectly, and if I use a telescope instead of glasses I can see to the moon. If I use a microscope instead of glasses, I can identify the separation of the most minute particles in the atomic world, but it is the same eyes and they do not work harder, they work less. Science has simply expanded the productive ability of my eyes to lay the world at my feet.

My hearing is not too good. I know there are millions of sounds to which my ear is not attuned to bring to my cognizance, but lend me a radio to act as a transmitter to bring all of the sounds of the world down and attune them to my limited sense of hearing, then I can hear every sound in the world, even the chirp of a cricket in far away Burma. It is the use of a machine to expand the hearing capacity of the human ear. The same principle applies to the skill of the hands. The cottage weavers of Bolton in Old England over 200 years ago stormed the first factory of old man Arkwright and burned it to the ground because they resented the introduction of machinery. They would not

Attending a board of government meeting at the end of the A. C. M. A. convention, left to right: Walter Montgomery, Dr. William P. Jacobs, George S. Harris, Fuller E. Callaway, Jr., Harvey W. Moore, Ellison S. McKissick, George P. Swift, Charles C. Hertwig, and (partially shown) Elliot W. Springs.

let science add to the dexterity of their fingers and thus increase their production remunerative capacity.

I had the exquisite privilege recently of speaking in the Town Hall of Manchester, only eight miles from Bolton where this historic event occurred, at a banquet given the Anglo-American Mission by the Lord Mayor of Manchester. I had the opportunity of telling the industry of Great Britain that the only difference between their industry and ours is the fact that we have heeded the advice of scientists and have taken the beginnings which their forefathers so bravely started and have improved upon it with automatic machinery. Thus the American industry has taken the leadership in a great international race to improve the productive capacity of the individual and thus increase his earned income by reducing the cost per unit and making more goods at a lower cost, thus selling them at a lower price that more people may afford to consume them and more may be engaged in their manufacture at infinitely higher wages than the balance of the world can afford to pay. Though it appeared to be rank heresy, I warned our friends of Manchester who are still carrying on at the birthplace of textile machinery that they are doomed unless and until they and their workers can see the light of the new dawn of textile mass production.

The great fallacy of much of our thinking is that so many of our misguided leaders follow a blind philosophy and slow down the caravan to the speed of the slowest camel because of their inability to interpret the philosophy of scientific and mechanical expansion of human skill and ingenuity. There is a profound lesson here for the textile executives of America and the balance of the world, and it is equally a lesson for the thousands who work with the textile executives in expanding American textile production, and likewise an important lesson for the American farmer, for he, too, faces the necessity of reducing his unit of cost if he expects to maintain a safe and sound position in world markets.

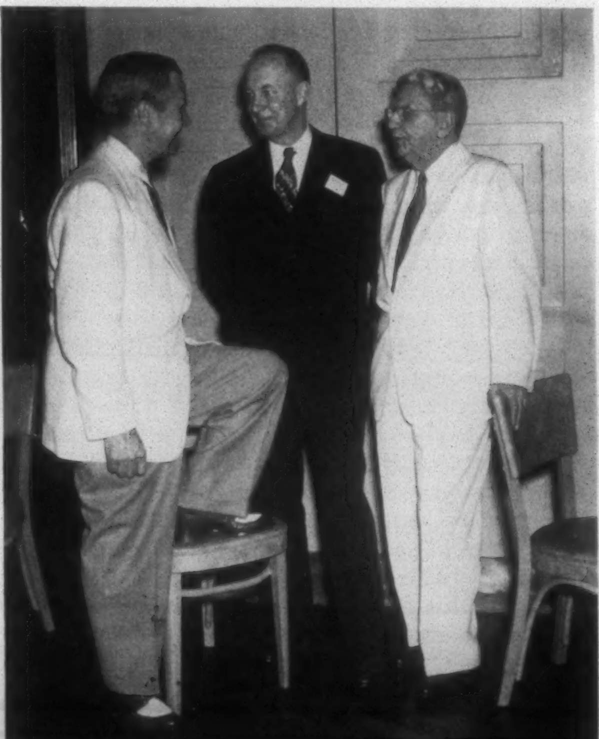
Misguided leaders who only know the trick of sowing seeds of dissatisfaction and encouraging malice, envy and distrust, find it difficult to make a right-about-face and encourage sound thinking on this subject and it appears therefore from past experience that we cannot expect much help from that source, but the textile leaders of America, who, through their ingenuity, their faith and their determination are supplying the jobs for the textile workers of America in increasing numbers and are supplying the biggest, the best and the safest market for the cotton farmers of America; they, the American textile thinkers, can and must preach this gospel of a world expansion of American textiles through scientific short-cuts and automatic machines for the sake of the security of the future of the American cotton farmer, the American textile worker, the American textile stockholder, for only thereby can the American industry survive against the low-wage competition of the world.

You must explain to your workers what a tremendous service is rendered them by automatic machinery in expanding the productive capacity of their hands. I admonish you, therefore, as world leaders in the field of advanced textile thought to carry this gospel upon every occasion, through means available, to the minds of the people of America and particularly to those for whom you work, with whom you work and from whom you buy.

And, in conclusion, I will also remind you that you are living in a new age, that your field is no longer limited to the community in which you operate, or even to the nation in which you serve, for whether we like it or not, we are in a one world era and it behooves us to be thinking ahead for the balance of the world, a good portion of which seems at times to have forgotten the art of thought. I urge you to mold your plans for the future to include an evergrowing effort toward exports if your product can find a world market. I urge you to measure your plans in terms of the severest of competition and the minimum of domestic protection. Both may be inevitable. I beg you to build around the principle of mutual understanding, helpful domestic co-operation from every angle and an intelligent appreciation of the consequences of future trends.

Basically, the purposes of the recent missions to Japan and England were to pave the way for the new field in which our industry finds its modern challenge. General MacArthur told us that before he reached Japan his army was forced to make the decision as to whether they would destroy all of the people of those islands, or simply give them a lesson, and let most of them live, and he said to us, "Now, you gentlemen must help us make the second decision, it is whether we let them starve to death and become permanent wards or whether we will help them on their feet, lay a sound foundation for greater improvements of the principle of democracy against the inroads of the Soviet brand of Communism, in this strange Oriental environment." It is most fortunate for us that he and his staff, with our assistance, are putting into execution all of the 16 points which our industry recommended to him.

In England, where our co-operation was offered in effectuating an orderly rehabilitation of the Japanese industry, we urged our cousins across the sea to take the first step in this important direction by the elimination of the



Mill men officers of the American Association, left to right: Ellison S. McKissick of Alice Mfg. Co., Easley, S. C., first vice-president; George P. Swift of Muscogee Mfg. Co., Columbus, Ga., second vice-president; and Harvey W. Moore of Brown Mfg. Co., Concord, N. C., chairman of the board of government.

currency barriers, which had worked to close the Oriental and colonial markets to American and Japanese textiles and to American cotton. I believe that the future of the leadership of the American textile industry in the world economy and its soundness and permanency through the years to come will reflect the eager response which our British friends have now given to our suggestions.

This association through the years to come should continue its aggressive interest in world problems and constantly help you to intelligently and faithfully fill a world need for your products. Textile leaders of America, the world of textiles is in your hands. Deal with it thoughtfully, sympathetically, scientifically; with the typical American faith in freedom of enterprise and the ability of human ingenuity to lead against all obstacles in a world of free competition.

R. & M. A. Cotton Research Is Summarized

New and wider utilization of cotton and its by-products is the objective of a large share of the cotton research being done this year under the Research and Marketing Act. In view of the increasing competition from synthetic fibers, paper and foreign cotton, it was agreed by officials of the department and the producer-industry cotton advisory committee that the utilization phase of the subject should receive the most comprehensive attention. High priority was also given, however, to greater efficiency in production and marketing with a view to improving the competitive position of cotton from both a cost of production and utility standpoint. Several projects are in progress toward that end.

Much basic information is yet to be learned, specialists say, about the characteristics of cotton with a view to processing it into a wider range of products. Accordingly, the over-all objective of one project is to make more effective and complete use of the many superior qualities that are inherent in cotton fiber. In this study six specific and new lines of work will be carried on as follows: minute evaluation of the swelling of cotton fibers when wet to find out which types of cotton fiber show maximum change upon wetting and drying and to what structural features these processes can be attributed; what causes the cellulose of cotton fiber to change upon oxidation and how can the adverse effects of it be reduced or eliminated; what are the possibilities of chemically bonding cotton fiber with resins to develop new products from cotton; can a higher degree of elastic recovery of cotton fiber be achieved through chemical treatment; can a practical energy-measuring method be developed for evaluating the merits of cotton in such end products as tire cord, belting, etc.; and, as an aid to buyers of raw cotton for manufacture, can a dyeing process be developed for estimating immaturity in cotton. This work will be conducted by the Bureau of Agricultural and Industrial Chemistry at its Southern Regional Research Laboratory, New Orleans, La., and will supplement related work now under way in that laboratory.

The object of another project is to determine, by actual in-service tests, the usefulness to consumers of woven clothing and household fabrics of different types of fabric construction. Fabrics made entirely of cotton or of cotton in combination with other natural fibers will be used in these tests which will concentrate on evaluating the serviceability of utility garments and household fabrics that might be acceptable to low and medium-income groups. Another phase of this study will be to determine by service tests the comparative merits of clothing and household fabrics made from cotton and competitive manufactured fibers. This work will be conducted by the Bureau of Human Nutrition and Home Economics in co-operation with other agencies of the department and with the state agricultural experiment stations at Rock Hill, S. C., Knoxville, Tenn., and College Station, Tex.

The development of the tricot knitting machine, which permits high-speed production of certain warp-knitted fabrics, has given an advantage to the synthetic fibers. Up to the present time cotton yarns have not been adapted for use on this machine. Therefore a project will investigate methods for making cotton yarns that can be knitted into fabrics on the high-speed tricot machine. Because of its urgency and the fact that the department does not have facilities for conducting this work, it will be done on contract with a qualified private contractor under the technical supervision of the Bureau of Agricultural and Industrial Chemistry.

Garments and other articles made of cotton are less resistant to soiling than those made from wool and certain other competing fibers. A recent survey among a representative cross-section of women indicated that if cotton fabrics could be made more resistant to soiling it would be a significant step toward increasing the popularity of cotton for clothing and household use. In an effort to find out why cotton fabrics get dirty more easily than many others and what might be done about it, a project has been approved under the R. & M. A. The B. A. I. C. has responsibility for having this study done on contract.

Under another project, also assigned to the B. A. I. C. for contracting, researchers will investigate the possibility of determining the infra-red absorption or reflection characteristics of cotton cellulose with a view to identifying the presence of specific organic chemical grouping in cottons which, for various reasons, have deteriorated. This work is considered important because many of the changes that occur in cotton fiber through deterioration of the cellulose by heat, light, oxidation, etc., are such as to make them difficult to determine by chemical means. An infra-red technique has been developed up to a certain point for measuring absorption of cotton cellulose but this method still has a disadvantage in that it cannot be applied to opaque fibrous substances.

The presence of neps (tiny clumps of fiber that occur in cotton yarn or in fabrics woven from cotton) has an important effect on the quality of many manufactured items. The more neps, the lower the quality. Because knowledge is very limited as to what causes these neps and what might be done to prevent them, research will be directed at this problem under the R. & M. A. To expedite the work the project authorizes the Bureau of Agricultural and Industrial Chemistry to have the study made under contract.

Another phase of cotton research, considered important by the industry if cotton yarn is to compete with synthetics, is the improvement of cotton warp yarns for carpets. The project, to be conducted by the B. A. I. C. under contract, will attempt to reach the desired objective through selection of cotton varieties with higher fiber strength; studies of mechanical processing and stretching; and the application of chemicals to increase friction between fibers and to bond fibers in the yarns.

The tensile strength of cotton fiber is an extremely important factor in determining the purpose for which a given lot of cotton can best be used by the manufacturer. It is important, therefore, that means be available for measuring the tensile strength of individual fibers with utmost speed and accuracy. Experts agree that there is a need to improve the Pressley tester which is now widely used for this purpose. A project under technical supervision of the B. A. I. C. is directed at this objective, plans being to have the work done on contract.

A project on cotton marketing is aimed at bringing the production of various types of cotton more in line with specific requirements of the textile industry. Data will be obtained as to the type and quality of cotton being used as compared with type and quality best suited for the various products made from cotton. Results should reflect economic as well as technological factors in cotton marketing and should indicate the characteristics and adaptability of cotton produced in standardized-variety areas. These data should also be a guide to cotton breeders in the development of varieties best adapted to specific end uses, and will indicate to producers the extent of available markets for various kinds of cotton. This study will be made by the cotton branch of the Production and Marketing Administration.

A study to be conducted by the Bureau of Agricultural Economics will seek to supply a basis for measuring the potential markets for cotton and cotton products. It is hoped that the results will, among other things, provide a better understanding of the significance of the supply and comparative price for synthetic fibers, the reasons for and the effect of the price differentials between grades and staples of cotton, and the extent of pyramiding of cotton prices at the various stages of cotton marketing, processing and distribution and the effect of price differentials on the demand for cotton.

The work outlined here is generally based on recommendations of the Cotton Advisory Committee which was appointed Feb. 20, 1947, to recommend research toward the solution of problems confronting the cotton industry. Members of this committee are: chairman, Ransom E. Aldrich, a cotton producer at Michigan City, Miss.; vice-chairman, Horace Hayden, president, National Cotton Ginners Association, Oklahoma City, Okla.; C. L. Andrews, C. L. Andrews & Co., Memphis; D. W. Brooks, Atlanta; Harry Caldwell, producer, Greensboro, N. C.; F. E. Callaway, Jr., Callaway Mills, LaGrange, Ga.; C. A. Cannon, president, Cannon Mills, Kannapolis, N. C.; R. A. Graham, producer, Greenville, Tex.; Burris C. Jackson, Jackson & Co., Hillsboro, Tex.; S. R. Nichols, president, Southern Compress Co., Des Arc, Ark.; and Elwood H. Smith, producer, Casa Grange, Ariz.

MAN-BUILDING POWERS

— The Personnel Department —

Part Two of a Series by W. M. McLAURINE

THE personnel department should have complete files on every job or occupation in the textile organization. It should also know the physical, mental and mechanical qualifications necessary for efficient operation of every job.

It should know the effort required, the fatigue produced, together with the average frequency and rest periods. It should know the speed, dangers, physical and mental energy required. All jobs require certain specific skills and these in turn require certain physical characteristics which with the skills produce efficient operation provided the mental reactions are capable of responding correctly.

The above statements are only indicative of some of the suggestions that will be considered when the subject of "Job Analysis" or "Man Analysis" is discussed. It is necessary to make these in order that certain general classifications may be made.

Many industries have advanced far into this field and now there are scores of tests available for use in determining intelligence, clerical ability, mechanical ability, personality and the interest factors. All of these phases of the applicant are very informative as to whether or not he is desirable.

The textile industry may not have progressed sufficiently far in scientific personnel to be able to use these tests, nor may their employers or would-be employers be sufficiently advanced to submit to their use. Be that as it may, they are very suggestive and every employer of people should secure several tests of each type and study them carefully. This study will give to the personnel director an idea of what other people expect of those whom they employ.

Of course in the study of these tests, it must always be considered the type of industry for which they were prepared; however, they will give a new motivation to the employment manager and may enable him to ask more intelligent questions.

This discussion revolves around manpower and can be considered only in relation to the job applied for. This discussion presumes that the employment manager has a detailed job analysis and knows the physical, mental and mechanical skills required. An example of what this statement implies will be given when the article on job analysis is discussed.

It is needless to record in today's scientific progress that a medical examination and even a psychological examination is necessary. With so many hidden and unrecognized human physical disabilities and with so much mental obliquity in life, an employer cannot be too careful in safeguarding the employee and his organization.

The personality of the switchboard operator of your telephone system is a key to the character of your business. Your business office and particularly the receptionist in your business office are keys to your character and that of your organization. In the same degree and manner, your personnel department and the attitude of those in charge are the first impressions that a new applicant for a job receives. They say first impressions are the most lasting.

This is the doorway to success or failure. This is the doorway to hope and ambition, or to doubt and disaster. There is an old maxim that if the land is well prepared the crop is half-made. The applicant who is courteously received and well employed is nearly always an efficient and loyal worker. Production steps up, waste steps down, labor turnover lessens and satisfaction and co-operation increases.

Employment and discharge, or in the vernacular "hiring and firing" has too often been done in a haphazard way. Hiring has been simply taking a man if you need him and then firing him if he does not fit. It has been done rather imperialistically at times—no reason, no effort to make him into an efficient worker. The old-time overseer prided himself on being hard-boiled. There was a great gap between the worker and the overseer. Personnel management is overcoming these defects. Workers have too often considered their employment only temporary and expedient—not much stability connected with the job—only a temporary resident. They often approached their would-be employer with this state of mind and the employer too often possessed the same attitude.

Due to personnel departments and careful employment this has largely disappeared. Not so many years ago in the textile industrial section, one in traveling the highways would frequently meet or pass textile mill workers moving from one section to another. Such a condition today is so unusual as to attract attention and comment.

People who are indifferently employed generally make indifferent employees. The textile industry has found this out and now it employs with greater care. This policy has had a very noticeable effect upon the workers.

In the progress of industrial life with its improved working and living conditions, shorter hours and increased wages, the textile operatives have progressed rapidly. They are better satisfied with life and their jobs. They do not want to move because personnel management has lifted the level of the type of the textile workers. They are no longer nomads but are among our best citizens taking part in all civic affairs. Proper and efficient employment policies have done much in bringing this about.

Opening, Picking, Carding & Spinning

THE MILL OF TODAY

By ROBERT Z. WALKER

Part Three: The Opening Line

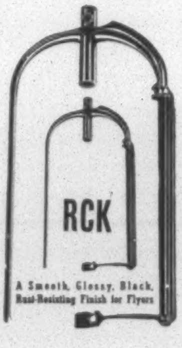
THE feed table is probably the most simple and inexpensive machine to be found in the modern cotton mill. Even though this is true, the feed table ably performs two very important functions, in addition to its main task of carrying stock from the feeders to the remainder of the opening line. These functions are the creation of further and more complete blending of the mix and the removal of hazardous tramp metal.

The feed table is located directly below the delivery mouths of the feeders which are arranged side by side in a straight line. The length of the feed table is determined by the number of feeders which exhaust onto it and by the distance between the feeders. The length is not of paramount importance. Feed tables which are extremely long may require a larger motor, the power required ranging from one to three horsepower. For best results the feed table should not be fed by less than two feeders or more than five. Fewer than two feeders would mean that the feed table would be supplied by only one feeder, in which case it would be unnecessary. The use of only one feeder is not recommended as there would not be any blending accomplished. More than five feeders to a feed table is not too practical under the modern standards of picker room layouts as the picker room is usually laid out so that each set of three pickers will be fed by an opening line. Under this condition if more than five feeders are used the production per feeder will be too low. Also, the feeders would supply such a large amount of stock at a time that the feed table, and the rest of the opening line, would be constantly starting and stopping. A constant starting and stopping of the opening line is not desirable as it will cause the evenness of the finished lap to be lowered. The opening line should be synchronized so that a smooth even flow of stock will be maintained.

There are two types of aprons which may be used on the feed table. The most common and popular type of conveyor belt is made of special rubberized cotton material which can withstand the weight of the stock without undue stretching. The belt of this type will travel around the drums of table smoothly and quietly. There are some feed tables in use which have aprons made of wooden slats which are carried on two bands. The slats are arranged so that there will be spaces between them to allow sand and grit to fall through and away from the good stock. The choice between the two different aprons or belts is influenced in each installation by the type of stock which will be run and by the amount of heavy foreign matter mixed with the good fiber.

The feed table is a blending factor. The main idea in using large mixes is to maintain a homogeneous mixture of fiber at all times so that the average conditions of the stock, such as the color, amount and type of foreign matter present, length of staple, and the characteristics of the individual fibers, will be the same at all times. The advantage of maintaining the same average qualities and properties of the stock is to reduce the number of the machine adjustments and settings which must be made at every stage of the processing procedure whenever the qualities of the stock change. In order to achieve this homogeneous blending a number of bales of stock are laid out behind each

LITTLE CHANGES MAKE BIG DIFFERENCES *in Quality*



Leading mills are finding they not only save time but improve quality when all spinning spindles and bobbins are uniform in size and style. They are finding, too, that Ideal can *change* their present spindles at a fraction of the cost of replacements. Shown above are a few of the many type spindles Ideal has changed to mill specifications.

If you are having difficulties, due to too many kinds of spindles, Ideal can save you time and money—so why not investigate the possibilities of *standardizing* on your *favorite* type of spindle. Ideal's precision workmanship assures exact conformity to your specifications.

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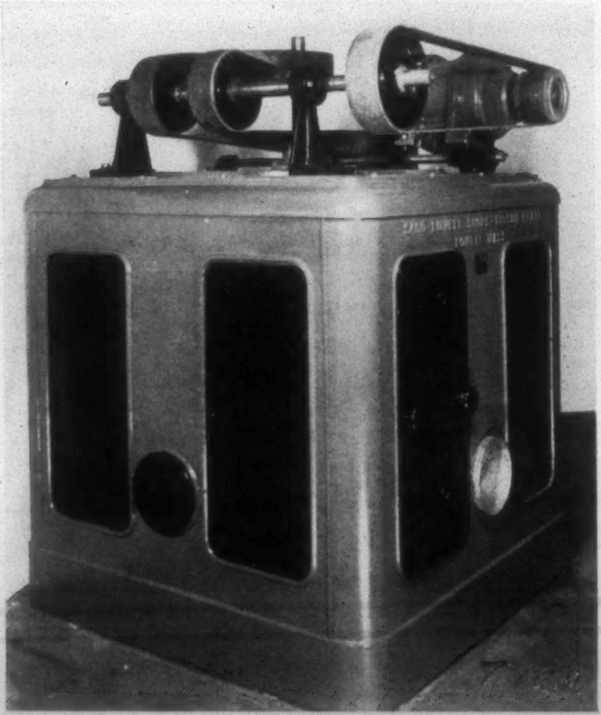
feeder. These bales are then partially blended together in the feeder and are delivered from the feeder onto the feed table in clumps which contain sections of fiber from most of the bales in that particular group of the mix. As the feed table is traveling from 200 to 300 feet per minute, each clump from a feeder is carried forward from beneath the feeder as soon as it falls. As all of the feeders are delivering stock to the feed table simultaneously, the stock from one feeder will be dropped on the feed table next to, and mingled with, the stock dropped by the other feeders. Therefore it can be seen that the feed table performs the very valuable service of mixing together the partial blends made by each feeder.

The other operation attributed to the feed table is the removal of tramp iron from the stock. This is not done by the feed table itself but by means of a magnet, the feed table serves only as a means of passing the stock to the magnet. The use of magnets for the removal of tramp iron has greatly increased in the past few years. The installation of these magnets in the opening line is favored by many mills and is considered mandatory by a number of insurance companies.

Many fires in the opening room and the picker room are caused by the beaters of the various machines striking against stray pieces of iron carried forward by the stock. The beater coming in contact with the metal strikes a spark which, in the presence of opened clumps of fibers and fanned by the air current passing through the machinery, will start a fire that will rage through the entire opening line and may be carried forward to the pickers. Such a fire will cause a tremendous loss of production, damage the machinery, and will ruin a large quantity of expensive stock. Even if the tramp metal, such as old nails, travelers, and pieces of banding, does not start a fire it will cause a considerable amount of damage to the machines through which it passes as the feed rolls will become cut and marred and the beater blades will be nicked. The magnets will remove a large percentage of the tramp metal and will give the mill a quick full return on the original investment if they prevent only a single fire.



Vertical opener with Gallows drive.

Two general types of magnets may be used for this purpose, the electrical magnet and the permanent magnet. The permanent magnet is preferred by a great many mills as it does not require an electrical current to operate. The magnet is always exerting force and will not be dead as is the case when the electrical connection is broken on the other type of magnet. There is nothing to go wrong or become out of adjustment so that the only maintenance required of the magnet is a periodic inspection and removal of the metal which has been pulled from the stock and will be found adhering to the face of the magnet plate.

There are several different positions in the opening line where the magnet can be utilized to advantage. The magnets may be placed along the conveying pipe between the various opening machines of the line and fixed so that the stock is carried over a hump. The hump is made so that the stock will strike against the face of the magnet plate, causing the tramp iron to penetrate through the mass of fibers until it is caught and held by the magnetic field. The most logical place to use the magnet is at the end of the feed table. When used at this point the magnet has an opportunity to remove the dangerous metal before any beaters are encountered. While the separation of the stock into small groups of fibers has not been completed, the clumps of fibers will have been opened enough to allow the tramp metal to be removed, in most cases. This is particularly true when the production of the feeders is low and the settings close. There are some mills which have not used the magnets in the form of a flat plate but instead have installed pulleys of the magnetic material at the end of the feed table. A magnetic pulley will remove a certain amount of tramp metal but is not generally regarded as being as efficient as the hump-type magnet. The reason for this is the speed of the feed table which is used in the cotton opening room. This speed is from 200 to 300 feet per minute, whereas the recommended speed of the magnetic pulley is a maximum of only 190 feet per minute, using the standard 15-inch pulley. The reason for the inadequacy of the magnetic pulley to operate efficiently at high speed is due to the fact that the metal is traveling on a horizontal plane and is subject to the magnetic field for only a fraction of a second. The magnet is separated from the stock by a conveyor belt and cannot exert enough force to cause the deviation of the metal from its course in the short time allowed. The problem is further enhanced when an attempt is made to use this pulley because if the speed of the feed table is lowered the stock will become piled too highly on the belt, so high that the magnet cannot pull and hold metal which is separated from it by a piled-up mass of stock. The hump-type, or flat plate, magnet will do a very satisfactory job of removing this undesirable metal from the stock and should be employed on every opening line.

The stock which is delivered from the feed table is taken by an air current through the conveyor pipe either to a condenser or to a vertical opener, depending upon the mills opening organization. In most cases the vertical opener is the second opening machine in the line. In recent years there has been an argument presented against the use of the vertical opener; the exponents of this argument claiming

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GETTING THE MOST FROM WINDING

Information about winding designed to show improvements
in winding equipment and new ideas in the winding operation

TRAVERSE ADJUSTMENT

No. 250 Sizing Machine

The several adjustments which are necessary in order to get the correct positioning of yarn on the sizing tube should never need changing if they are properly made in the first place. But occasionally a machine has to be moved or it becomes necessary to dispose the yarn differently on the tube, requiring readjustments.

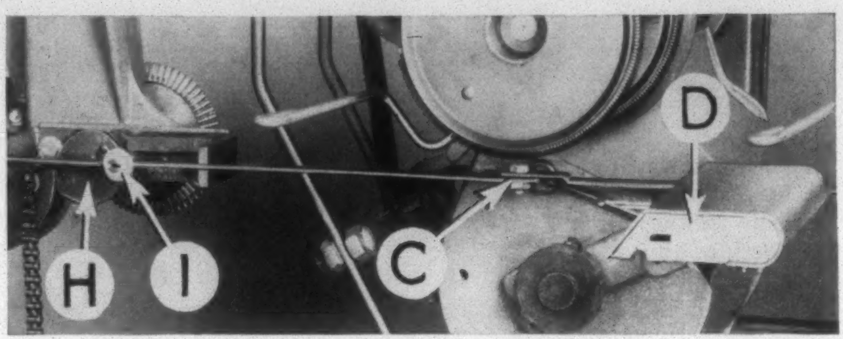

Fig. 2. Builder cam mechanism with cover removed to show heart-shaped traversing cam.

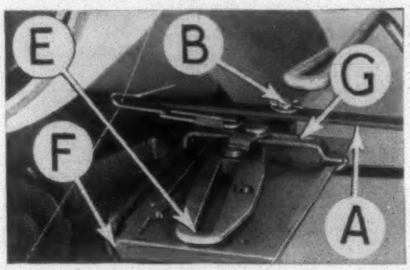

Fig. 1. Traversing mechanism with cover removed. (Yarn has been passed through the thread guide to show the incorrect method, which makes two sharp bends.)

Taper bar links. On machines operated from the same builder cam mechanism, the taper bar links (A in Fig. 1) must be adjusted so that all spindles have the same traverse length.

1. Remove the spring at the left-hand end of the row.

2. Measure carefully the distance between centers of the nearest spindles on two adjacent machines.

The distance between the taper bar pins (B) should be equal to this distance. If not —

3. Loosen bolt (C in Fig. 2) joining the taper bar links for the two machines; adjust as necessary.

4. Replace the spring at left end.

Follow same procedure for other machines in the row if more than two have taper bar links coupled.

Traverse. It is sometimes necessary to re-center the traverse on the sizing tube if the distance from selvedge to edge of tube is not equal front and back.

1. Remove the guard (D).

2. Stop the builder mechanism with taper bar slot (E in Fig. 1) parallel to the traverse bar.

3. Insert a screwdriver at F and loosen the screw on the end of the traverse bar enough to remove the front end of the thread guide bell crank carrier (G) from the slot in the traverse bar.

4. With the toe of the carrier remaining in the slot (to keep the traverse bar from turning) tighten the screw.

Now the traverse bar can be moved in or out by means of the screw. Since the traverse bar has 32 threads per inch, one complete turn changes the thread guide location a distance of $\frac{1}{16}$ in. (rather than $\frac{1}{32}$ in., because what is added at one end is removed from the other).

The length of the traverse depends on the position of the taper bar links relative to the cam (H in Fig. 2). So —

5. Stop the builder mechanism at the point of maximum traverse — which means with the roll at the low point of the cam.

6. Run yarn on an adjacent spindle and measure the traverse.

The normal traverse is 6 in., but some mills prefer a longer traverse so as to reduce the thickness of yarn on the tube; others prefer it shorter to make absolutely sure the selvedges are well protected.

7. To change traverse length, loosen the nut (I) on the builder cam follower roll stud.

8. Move the taper bar link (A) — by hand — to the left so that the roll is clear of the cam. (Otherwise, the tension in the spring might cause the cam roll to shift an uncontrolled amount.)

9. Tap the stud lightly along the bar — to the left to lengthen the traverse, to the right to shorten it. The ratio is roughly 2 to 1 — shifting the roll $\frac{1}{16}$ in. changes the traverse length about $\frac{1}{8}$ in.

Now, with the traverse in proper adjustment, full advantage is taken of the unique yarn distribution method provided by the machine.

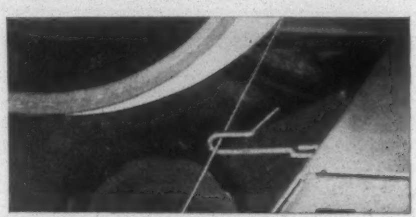

Fig. 3. Yarn passing correctly through guide for straight thread line.

May, 1948

23-7-6

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

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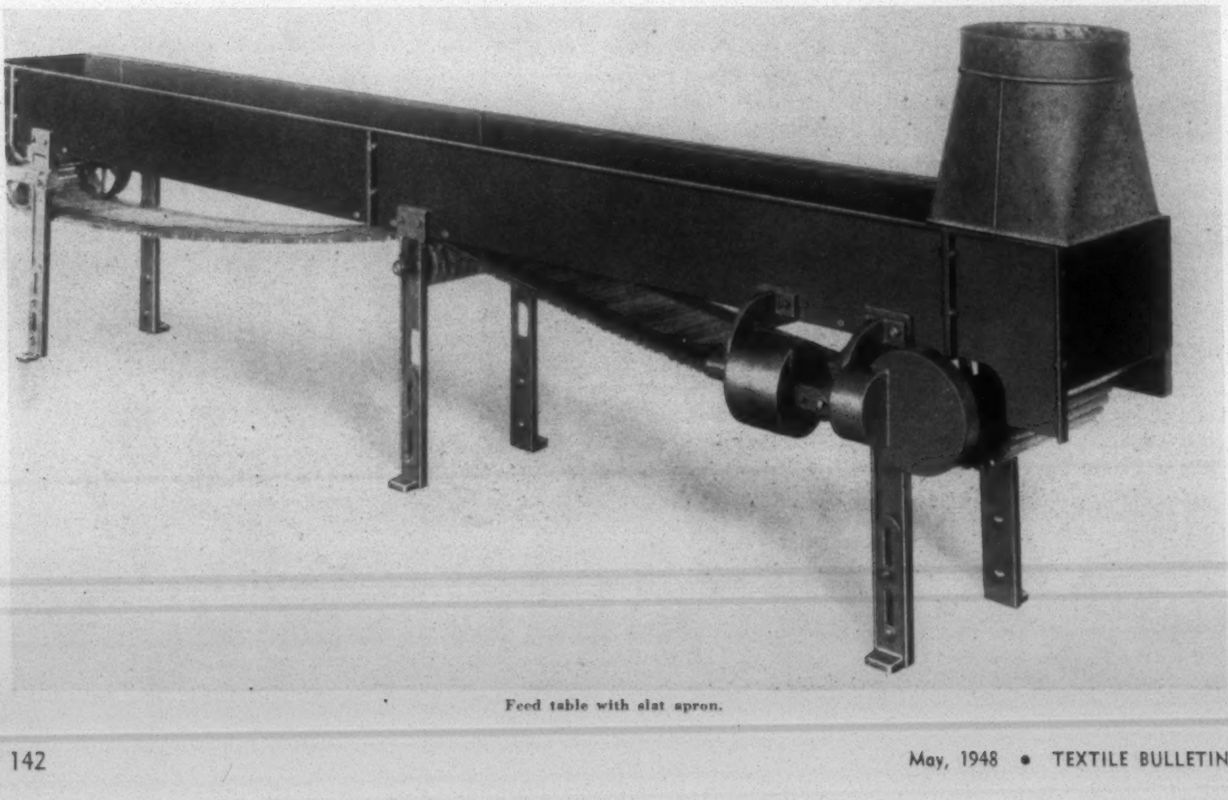
that the machine is too harsh in action and damages the fibers. The vertical opener is supposedly to be particularly most undesirable when processing the cleaner grades of fine, long-staple cotton as it is claimed that the stock becomes badly curled by the machine.

The greater majority of mill men and textile technicians do not concur with these protests against the use of the opener and feel that it should be included in every opening line. It is recommended that the intake mouth of the machine be built with a two-way piping system so that the shock can be by-passed around the vertical if necessary. Generally, the stock would be by-passed if synthetics are blended with other fibers, or if careful experimentation has shown that the machine is not suitable for the processing of some particular stock. However, it is generally agreed that stock which is over 1¼-inch in staple length will be damaged in the vertical opener. The vertical can be injurious to the fibers if the machine is not properly adjusted and operated to conform to the requirements of the stock being processed. In most cases, the machine will have a beneficial effect on the stock with regard to the cleaning performed as long as it is correctly used. If the machine is set indiscriminately without paying the proper attention to the beater speed and the speed of the fan generating the air current it may well be the cause of excessive curling of the fibers. However, it would be a grave mistake on the part of any cotton mill to remove the vertical opener entirely from the opening line.

There are four adjustments to be made with regard to the vertical opener that will affect the efficiency and beneficience of its action upon the stock. These are (1) the beater speed, (2) the fan speed, (3) the distance between the grid bars and the beater picks, and (4) the opening and angle of the grid bars. The production of the machine is so great, from 500 to 1,500 pounds per hour, that this item does not have to be considered. If the flow of stock into and through the machine is even it is capable of handling any amount of stock needed by the mill. The one point to watch for in this regard is that the stock is not fed to the machine in large amounts at irregular intervals. If this occurs the stock may choke up and will not pass through the beater section properly. A choke-up of the vertical opener will cause damage to the fibers which are in the machine at that time.

The beater of the vertical is not simply a series of six steel discs mounted on a supporting shaft, each disc fitted with some beater fingers. It is obvious that this is the general arrangement, and it is easily noted that the six discs vary in diameter, the largest disc being 33 inches in diameter and mounted on the top position of the shaft. The smallest disc is 18 inches in diameter and is fitted to the lower end of the shaft. The entire arrangement of the discs, and the steel fingers or picks on the discs, has been carefully determined only after exhaustive experiments have shown just what the best method would be. The picks which are mounted on the beater discs are arranged in a very definite manner. First of all, the discs are held apart exactly six inches by means of cast-iron spacer rings. The discs are numbered from No. 1, the largest at the top of the shaft to No. 6, the smallest at the bottom of the shaft.

The picks which are mounted on the discs vary in shape and length. Altogether on the six discs there are 34 picks, but there are 12 different models of picks used to make up the total. Some of the picks are built so that they will bend downward when in position, and still others are extended straight out from the disc. The number of picks per disc vary for each disc and also the types of picks that are used on the various discs will be different. The general plan that is followed is to plan the arrangement of the picks so that the straight picks will strike the stock and knock it against the grid bars with the most force. The picks which are given an upward angle will tend to pass the fiber up to the next disc, while the picks set at a downward angle aid the picks of the lower disc by picking up the stock and carrying



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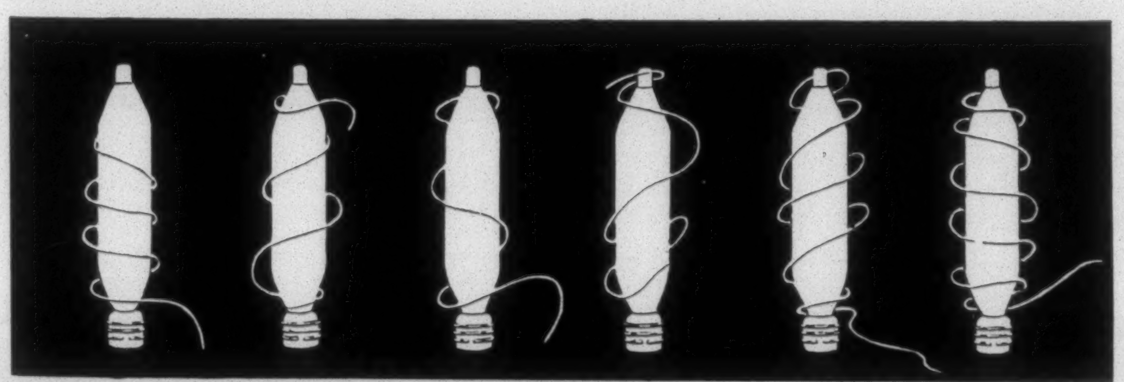

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it to a higher position in the machine. These picks are numbered from No. 1 to No. 12, each number being different from the others in either length or angle, and therefore whenever a worn one is replaced it should be matched exactly by another having the same number. If just any spare pick is used, or if the pick is just left out entirely, the efficiency of the machine may be seriously impaired or it may cause the stock to linger in the machine for too long a period and cause the formation of damaged or curled stock.

Worn picks will not open the stock thoroughly or efficiently and should be replaced as soon as the wear becomes evident. The picks are bolted to the discs so that the replacement is a simple matter. In most mills steel picks are used and are generally satisfactory. There are some mills which use brass picks, mainly to reduce the fire hazard in case tramp metal is carried into the beater section. If magnets are used the necessity of using the more expensive brass picks is greatly reduced.

Beater speeds range between 600 to 750 r. p. m. in most cases. The speed of the beater should be determined by the production of the opening line, or the poundage of stock that will be run through the machine per hour. If the production is less than 900 pounds per hour the beater speed should range between 600 and 700 revolutions per minute. The higher beater speeds should be used when the production is over 900 pounds per hour. It is necessary to increase the number of revolutions per minute of the beater in order to beat a larger amount of stock to the same degree if a lesser poundage was being processed with a slower beater speed. The increase in beater speed is also necessary in order to carry the greater bulk of stock through the machine without choking.

The speed of the fan which draws the stock from the vertical opener is closely allied to the beater speed and should be carefully corelated with it. This is a point which is all too often overlooked when adjusting the vertical opener to the particular characteristics of the stock being processed. The fan speed of the usual condenser should be approximately 900 r. p. m. when the beater is running at 650 to 750 r. p. m. There should be a balance between the beater speed and the fan speed, so that if the beater speed is lowered, the fan speed should be increased. The main cause of cotton becoming curled or damaged unnecessarily in the vertical opener is due to the neglect of the mill to correctly adjust the fan speed after changing the beater speed. When the beater speed is lowered it does not carry the stock out as rapidly. If the fan speed is not increased to compensate for this decrease, the stock will remain in contact with the beater too long and will become beaten and whirled around until curling will be evident.

Curling occurs when groups of partially opened fibers become manipulated in such a manner that the fibers become partly twisted around each other. Stock which is in this condition will not be properly opened and will be damaged in later opening and picking operations, as it will be necessary to tear these groups of fibers apart. When the stock is becoming curled it will help to remedy this defect by changing either the settings of the beater to the grid bars or the speed of the beater and fan.

The grid bars are bars arranged around the periphery of the beater whose function is to extract the waste matter from the good stock. The bars are formed of triangular steel and positioned so that the narrow edge of the triangle is facing inward at an angle to the beater. As the groups of fibers are struck by the picks of the beater they are thrown against the grid bars with considerable force. The momentum of the heavier particles of waste is such that they will be carried through the openings between the bars and out, where they will settle into the calm air of the waste area. The grid bars are adjustable so that the angle of the bar to the beater can be changed. While a change in the angle necessarily changes the opening between the grid bars, the important factor in waste removal is not the distance between bars but the angle of the bars. As it is difficult to measure the angle of the bars, the adjustment is usually measured by the opening between them. Wide openings and acute angles result in obtaining the maximum waste extraction. The minimum opening is one-eighth of an inch and in this position the angle will be very small and the bars will be practically flat. When the vertical opener is run in this manner there will be a minimum amount of waste removed. The closer settings are generally used when processing the shorter staple fibers in order to prevent the loss of too much good fiber. The maximum opening between grid bars is $\frac{5}{16}$th of an inch, and this will cause the angle of the bars to be the most acute. Long staple fibers should be processed with the machine adjusted in this way. Cotton of the average staple length and the usual amount of waste will be cleaned very efficiently and satisfactorily and without damage, when the grid bars are set so that there will be an opening of $\frac{3}{16}$ths of an inch between them.

The final setting of the machine is the distance from the picks of the beater to the grid bars. This setting is accomplished by raising or lowering the entire beater assembly by means of a handwheel. The distance between the beater and the grid bars is increased by raising the beater. This setting is governed by the length of the staple. In general, the setting for the average set of condition and the average staple length will be from one-quarter to three-eighths of an inch. For staple which is shorter, the beater should be lowered so that the setting will be closer. When long staple fiber is being cleaned the setting should be increased as curling may be caused by using too close a setting.

Every mill will find it profitable to check the settings of the vertical opener and the fan and beater speeds under which it operates. Far too little attention is paid to this much abused workhorse of the mill, although it is one of the most efficient and dependable machines in the opening line. The above settings and speed will not be perfectly correct in every case and will not give the highest efficiency of waste extraction for every mill. There are too many variables such as the trash content, staple length, type of trash present, and the other characteristics of the fiber, for any arbitrary set of adjustments to fit all cases. However, they will serve as a benchmark from which the mill can experiment until the machine is more closely attuned to the special working conditions of a particular case.

Enough cotton to make a new dress for every housewife in the United States—a total of 94,902 bales—goes into the manufacture of motor trucks bought by America's trucking industry each year, according to a booklet published by the American Trucking Associations, Inc.

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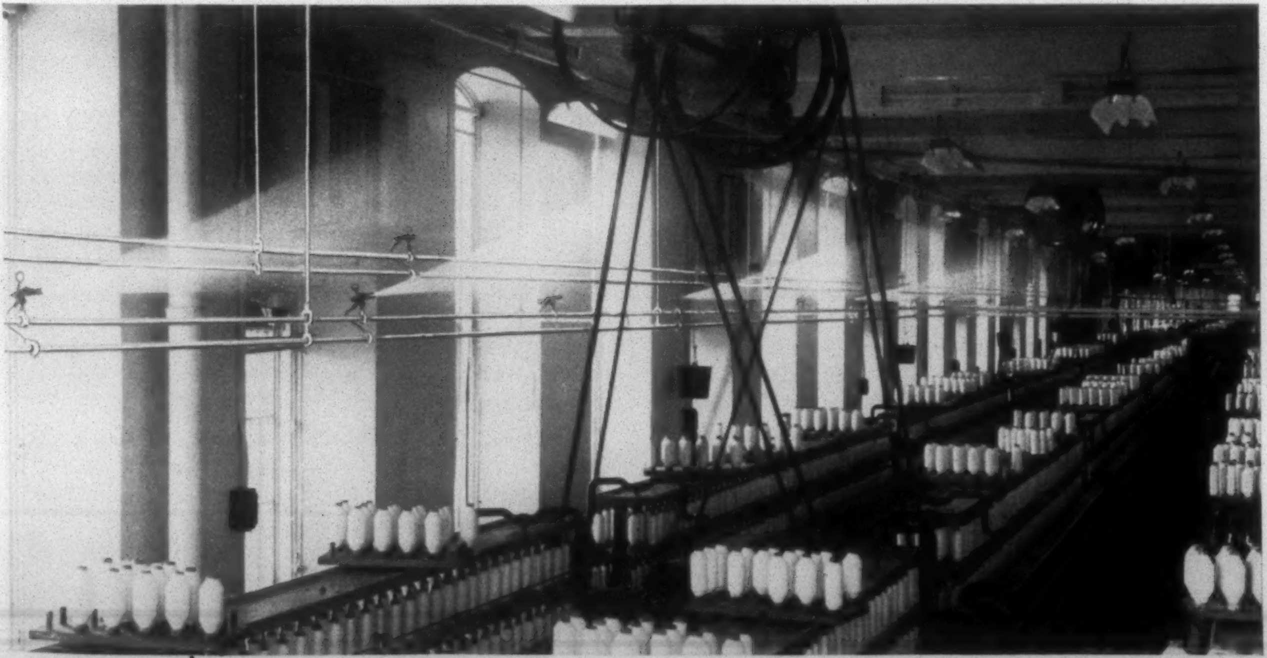

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EVOLUTION OF AN IDEA

Part Five of a Series by H. E. WENRICH

FEW Americans are unfamiliar with the expression, "Life Begins at Forty." This catching phrase is the title of a once, best-selling book, making non-fiction history during the depression years of the late '20s and the '30s. Only the uninitiated of the pre-war years will fail to recall that during the lean years, many employees, reaching the age of 40, had the door closed on their gainful employment due to the erroneous belief that youth, with his springier step, could produce more. Today, 80 per cent of employers *know* that the older employee can produce more and better work than generally done by the younger workman. Why? There are several good reasons.

Let us refer to the preceding article in this series and read once more the lead-off paragraph: "Some of today's most promising young men are on their way up, getting there with 'ideas.'" One such young man, with uncanny ability, is Stanley Hiller. Starting at the tender age of ten, when the "motor bug" bit him, Hiller made good use of his mother's washing machine gas engine to power his coaster wagon. The young motor car skipper became a well-known figure to traffic cops and motorists around Berkeley, Calif. This, then, was Hiller's start on gaining experience and his early background in motor lore. Of course, environment will help to progress ability, but it requires understanding and generous doses of thinking to sift the best from earlier ideas, and Hiller had just those qualities to take the best from the past and add them to new ideas on helicopters, enabling him to come up with his sensational Hiller-copter.

But the race isn't always won by the runner who potentially is the most nimble-footed. Regardless of the job, the man with experience, having many years of solid background, will mostly be the one to break the tape when the course is ruggedest.

When new products are tried, such as newer, modern machinery or, as in the textile field, new yarns or new chemicals for various uses such as sizing ingredients, waterproofing compounds, finishes, etc., it often becomes necessary to overcome some troublesome fault during processing so as to avoid serious losses. Often, when trouble appears to be hopelessly out of hand, the "old man" as some of the older men are usually referred to, will come up with some solution to save the day.

Where do these old timers—after 40—get the answers? In fact, where comes the "impossible" ideas that are so often thought up to short cut standard methods. Not many of us, among the average people, can be considered a second gadget-making Hiller. But all of us can have something in common—we can think! If a problem cannot be solved by adding, subtracting, or multiplication, it can be joined in some manner; and this criterion is one of the reasons why the "old timer" can accomplish those seemingly impossibilities.

Thinking—or imagination, or call it whatever you will—will take on a new directive and often, when combined with some past experience, create an entirely new approach to offer a solution. One such combination of oldness and newness can be cited as an example of how to get things done. To hundreds of Du Pont scientists goes credit for the accomplishment of nylon, the yarn that is considered more perfect than silk. In addition to bringing out this new polyamide compound, it was necessary for Dr. Carrothers to supervise a new approach for extrusion and solidification of the filaments. Within the past few years, nylon has reached one of the most amazing records in the textile industry, and used in practically all marketable products from fishline to ribbons and ties to truck tires and upholstery. Though Dr. Carrothers' sudden death ended a brilliant mind in research, his painstaking search for perfection still remains the formula that is ever progressing Du Pont's nylon and other fibers still in their test tubes.

When nylon entered the line of textile yarns, a new approach in processing was found necessary, too. The open filaments offered considerable trouble to weavers until a few additional turns to the inch was given to prevent chafing and breakage. The seven-turn nylon became an excellent yarn for warps that would keep the looms running at peak efficiency. It was also found that if nylon warps were resized, the former sizing would adhere better, preventing the white accumulation of fly from harness and looms and give still a better running warp. There are many problems in every range of deniers, and the conversion of nylon deniers into various finished goods will open up new difficulties that must be answered successfully with new ideas and new gadgets. Will the newer 15-denier or ten-denier be woven into fabrics? If so, the personnel in the weave shed will be the one to think up the ideas required to keep the machinery running. And this holds true, regardless of the materials being processed.

Nylon's net screening offered problems. Although Du Pont's earlier control over manufacturing methods usually required a predetermined course to follow, one plant processing the heavy leno netting came up with a new idea that nearly halved warping time. The usual method of warping spooled nylon required a bobbin creel somewhat similar to the old silk system. The weave plant mentioned, came up with the double-creel idea. Only recently, finer gauges of netting yarns and monofilament are furnished on cones; here is a saving, not only in the increased size of the package, but shipment costs are cut.

Other ideas on warping short-cuts have proven still more

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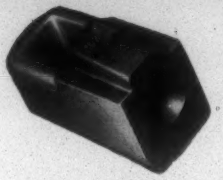

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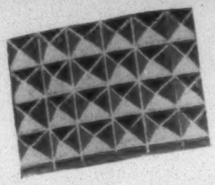

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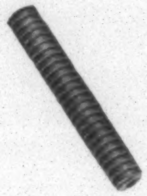

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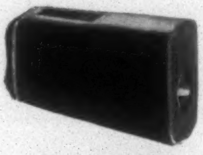

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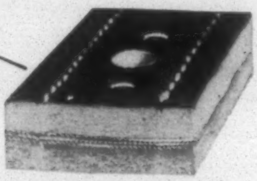

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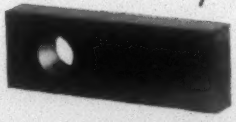

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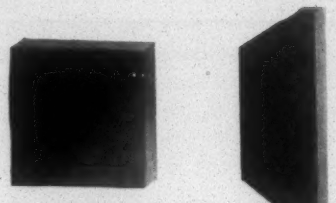

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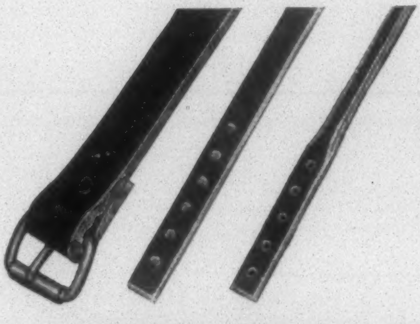

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revolutionary. The warping of saran monofilament screening was a slow, tedious method on old-type warpers. Sipp-Eastwood's new, modern horizontal warper came out and prevented buckling from the enormous pressure exerted by the monofilament or increased warp length of other yarns. But still a fresher idea popped into an employee's mind; why not make a creel and place it behind the sizer for the direct beaming of saran from creel to loom beam? A thought—an idea taking shape—a new device assuming symmetry and a heavy V-shape creel placed behind the sizer, became the means of entirely eliminating the old warping method on heavy, strong yarns. Bobbins running from start to finish also permitted knotless warps and contributed to increased loom production and better fabrics.

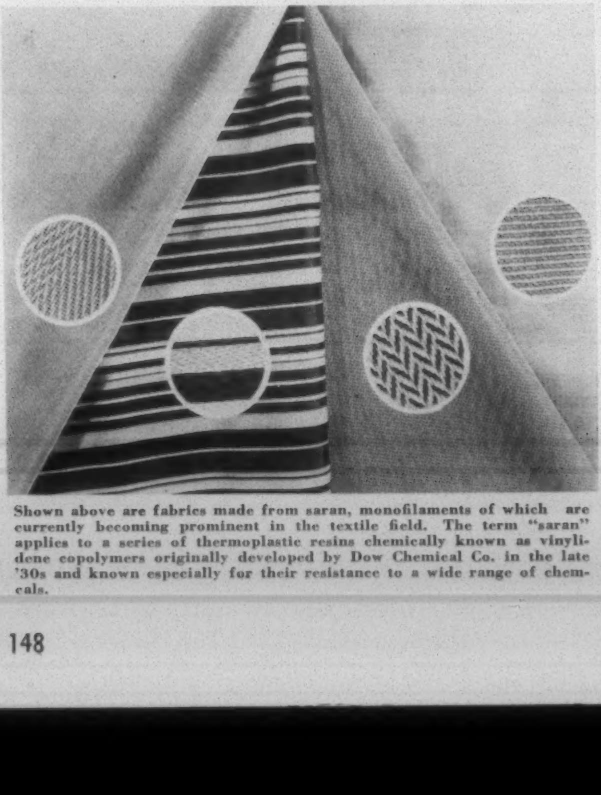
But in step with the new warpingless creel, the monofilaments required stretch to prevent some strands cutting through the warp and leaving loose yarn during the later stages of weaving. Thus the stretch offered a new problem as beam barrels were easily crushed. It became necessary to install all-steel beams to eliminate the trouble. Today, the wood barrels can be covered with aluminum tubing, and a further saving made from the maintenance angle.

The heavier monofilaments cannot be handled successfully on fully automatic bobbin widers or looms. Eventually, this difficulty will be overcome when new and stronger and more perfect cutters are devised. Here is a new line of approach; any reader working on bobbin winders and around automatic looms can start thinking up some new gadget that will give the solution to further production.

But a tip to the person trying to solve the problem of how to weave heavy monofilaments on cotton, woolen, or rayon automatic machinery—when a bobbin or shuttle change is made and just previous to the temple cutter working, the new strand must be held in some manner to prevent it whipping into the edges and cutting out the warp strands. The deplenished thread must be cut off and removed clean and on every change. Think it over. Work the idea out. You may come up with the answer that will only partly supply the backlog of orders awaiting the vast market possibilities of monofilament yarns.

Monofilament fabrics are a new, pleasant adventure in textiles. They offer new markets where a product is needed that will resist acids and hard wear. New fields of utilization for special-purpose fabrics promise a stupendously amount of yardage. Here is a chance for the small weave shed to open up a new approach to continued operations when the going becomes more precarious on a buyer's market. Just assume that the idea for a better cutter will be long in gadgeteering to a usable device applicable to bobbin winders and automatic looms, and hand-change looms will still be turning out yards when the automatics are lying idle for want of a simple weave to turn out, when markets are glutted with crepes, twills and other mass production weaves.

"We've tried everything to combat the odor; now I have a radical suggestion."



Shown above are fabrics made from saran, monofilaments of which are currently becoming prominent in the textile field. The term "saran" applies to a series of thermoplastic resins chemically known as vinylidene copolymers originally developed by Dow Chemical Co. in the late '30s and known especially for their resistance to a wide range of chemicals.

Yes, monofilaments are on the way up. And they will stay up for many, many years. Monofilaments will make new jobs. New ideas formulated into new fabrics will be a combination creating new and better opportunities for many people. You can enter into the magic circle of monofilaments by thinking. The writer, shortly after his first experience with monofilament screening, came up with an idea on a monofilament fly swatter. Corny, wasn't it? But you would be surprised at the hundreds of thousands of fly swatters sold annually in America. Still more corny was the search for a patent possibility on a fly swatter made from monofilament screening fabric. The Washington attorneys advised against such a search as being useless. When the good advice was considered in the light of what is already being produced, the fly swatter patenting idea wasn't so bright—as there are excellent rubber and metal-screening fly swatters on the market. But the idea for a monofilament swatter could still be considered fairly good. Every person should swat the fly! And why not a good swatter that could be dipped in hot disinfectant without damaging the material. Metal screen rusts, breaks or tears—but not so monofilament screening.

So through our everyday working hours, we have a few laughable ideas that are really good, but still capable of getting the ha ha. How about a good monofilament gadget to place in the modern kitchen sink to strain heavier matter from the waste water. It should be able to corner some of the markets rubber sink strainers control. No marring of porcelain or enamel—and what a give-away item this would be to the slogan-contesting soap companies! But a greater boon it would be to the person thinking up the idea, if he could step in and receive some bit of compensation as an incentive to prod him on to greater possibilities.

Granted that every yarn produced has certain marketable outlets, very few new creations can reach the potential peaks of nylon and saran. One new yarn, showing promise of considerable use, is the new Du Pont "Thick-and-Thin" for home refurbishing fabrics. This new yarn offers new pleasing mixtures for new designs offering a variation in decorative values. This yarn will require additional ideas in processing through warping, twisting, bobbin winding and weaving. Can it be machine twisted or must the yarn be hand twisted for loom warps? Whatever the problem, it will require an employee to figure out some device to further process the yarn through the various stages of a yarn into a fabric. Top flight leaders may think up the new, but usually it requires everyday experience to make the new function efficiently.

One of those new ideas that is making great strides is Steralon fabrics. This new type fabric is composed of equal proportions of garnetted cotton and garnetted rayon and bonded together by an entirely new plastic liquate. Thus a new idea, plus a new method, using some new ingredients, brings up an entirely new fabric that requires no weaving or knitting—an entirely new process requiring a new approach in manufacturing. And this new product is turning up new uses that offers steady employment to additional employees that will be required to produce the fabric for ever widening demand. Ideas! Gadgets! New products! New markets! All of these mean better working conditions and better living for us all.

Maintenance & Engineering

The Electrical Code And Textile Mill Wiring

Part Eight of a Series by JAMES T. MEADOR

IN this issue we need to delve into a very necessary part of the National Electrical Code, for general use and application of such items of apparatus and equipment as you might come into contact with during your work of either maintenance or new installation. The following code provisions give a lot of information on such things as prefabricated buildings, flexible drop cords and extension cords, lighting fixtures, lamp holders, lamps, receptacles, and rosettes, and such appliances as might be installed in village houses, mill cafeterias, etc.

Prefabricated Buildings

Section 3901, Scope: The intent and purpose of the following sections is to define approved methods for the wiring of prefabricated building sections, panels, or units designed for later erection or assembly as integral parts of buildings whether wired in the process of manufacture or at the site of erection or assembly.

Section 3902, Wiring Methods: Only wiring methods recognized in this code shall be used.

Section 3903, Code Provisions to Apply: The provisions of this code shall apply for the type of wiring method used and the type of construction employed.

Flexible Cords

Section 4001, General: Flexible cords shall be suitable for the conditions of use and location.

Section 4002, Types: Cords of the several types shall conform to the descriptions of Table 31 of Chapter 10. Types of flexible cords other than those listed in Table 31, and other uses for types listed in the table, shall be the subject of special investigations and shall not be used before being approved.

Section 4003, Use: Flexible cord may be used only for (1) pendants; (2) wiring of fixtures; (3) connection of portable lamps or appliances; (4) elevator cables; (5) wiring of cranes and hoists; (6) for the connection of stationary equipment to facilitate their interchange; or (7) to prevent the transmission of noise or vibration. Flexible cord shall not be used (a) as a substitute for the fixed wiring of a structure; (b) where run through holes in walls, ceilings, or floors; (c) where run through doorways, windows, or similar openings; (d) where attached to building surfaces; or (e) where concealed behind building walls, ceilings, or floors.

Section 4004, Splices: Flexible cord shall be used only in continuous lengths without splice or tap.

Section 4006, Minimum Size: Flexible cords shall not be smaller than No. 18, except that tinsel cords, or cords having equivalent characteristics, of smaller size may be approved for use with specific appliances.

Section 4007, Insulation—Over 300 Volts: If the voltage between any two conductors exceeds 300, but does not exceed 600, flexible cord of No. 10 and smaller shall have rubber or thermoplastic insulation on the individual conductors at least $\frac{3}{64}$ inch in thickness, unless type S, SO or ST cord is used.

Section 4008, Overcurrent Protection: Flexible cords not smaller than No. 18, and tinsel cords, or cords having equivalent characteristics, of smaller size approved for use

TABLE 3—CHAPTER 10

Allowable Current-Carrying Capacity of Flexible Cord and Fixture Wire in Amperes
(Based on Room Temperature of 30° C. (86° F.) See Section 4008.

Size AWG	*Flexible Cord*						*Fixture Wire*	
	Rubber and Cotton Types CT, CTJ Rubber and Asbestos Types AT, ATJ	Rubber Types PO, C PD, P, PWP, K, E, EO Armored Type CA	Rubber Types S, SO, SJ SJO SV POSJ Thermo-plastic Types ST, SJT, SVT, POT	Types AFS, AFSJ, HC, HPD, HSJ	Types AVPO AVPD	Cotton Types CFC* CFPO* CFPD* Asbestos Types AFC* AFPO* AFPD*	Rubber Types RF-64 RF-32 FF-64 FF-32	Thermo-plastic Types TF TFF Cotton Type CF* Asbestos Type AF*
27**	0.5	..	..	..	..	..	..	..
18	..	5	7	10	17	6	5	6
17	..	..	..	12	..	..	..	..
16	..	7	10	15	22	8	7	8
15	..	..	..	17	..	..	..	..
14	..	15	15	20	28	17	..	17
12	..	20	20	..	36	..	..	..
10	..	25	25	..	47	..	..	..
8	..	35	..	..	..	..	..	..
6	..	45	..	..	..	..	..	..
4	..	60	..	..	..	..	..	..
2	..	80	..	..	..	..	..	..

*These types are used almost exclusively in fixtures where they are exposed to high temperatures and ampere ratings are assigned accordingly. **Tinsel cord.

with specific appliances, shall be considered as protected against overcurrent by the overcurrent devices described in Section 2403. Cords shall be not smaller than required by Table 3, Chapter 10, for the rated current of the appliance.

Section 4009, Pull at Joints and Terminals: Flexible cords shall be so connected to devices and to fitting that tension will not be transmitted to joints or terminal screws. This shall be accomplished by a knot in the cord, winding with tape, by a special fitting designed for that purpose, or by other equivalent means.

Lighting Fixtures

Section 4101, Scope: Lighting fixtures, lampholders, pendants, receptacles, and rosettes, incandescent filament lamps, arc lamps, electric discharge lamps, the wiring and equipment forming part of such lamps, fixtures and lighting installations shall conform to Sections 4102 to 4216 inclusive, except as otherwise provided in this code.

Table of Some Commonly Used Ratings for Wiring Devices, Such as Receptacles, Plugs, Switches, Cord Connectors, etc.

125 volts	15 amperes,	normal duty
250 "	10 "	" "
250 "	20 "	heavy "
575 "	10 "	" "

Section 4102, Application to Other Articles: Equipment for use in hazardous locations shall conform to Article 500.

Section 4103, Live Parts: Fixtures, lampholders, lamps, rosettes and receptacles shall have no live parts normally exposed to contact, except in the case of cleat-type lampholders, receptacles and rosettes which are located at least eight feet above the floor. Lampholders, receptacles and switches which have exposed accessible terminals shall not be installed in metal fixture canopies or in open bases of portable table or floor lamps.

Provisions for Fixture Locations

Section 4111, Fixtures in Damp, Wet or Corrosive Locations: Fixtures installed in damp or wet locations shall be of vaportight or other types approved for such locations and shall be so constructed or installed that water cannot enter or accumulate in wireways, lampholders or other electrical parts. Fixtures installed in corrosive locations shall be of a type approved for such locations.

Section 4112, Fixtures near Combustible Material: Fixtures shall be so constructed, or installed, or equipped with shades or guards that combustible material will not be subjected to temperatures in excess of 90° C. (194° F.)

Section 4113, Fixtures over Combustible Material: Lampholders installed over specially combustible material shall be of the unswitched type and unless individual switches are provided, shall be located at least eight feet above the floor, or shall be otherwise so located or guarded that the lamps cannot be readily removed or damaged.

Section 4115, Fixtures in Clothes Closets: Fixtures in clothes closets shall be installed on the ceiling or on the wall above the door. Pendants shall not be installed in clothes closets.

Provisions at Fixture Outlets

Section 4121, Space for Conductors: Canopies and outlet boxes taken together shall provide adequate space so that fixture conductors and their connecting devices may be properly installed.

Section 4122, Temperature Limit of Conductors in Outlet Boxes: Fixtures shall be of such construction or so installed that the conductors in outlet boxes will not be subjected to temperatures greater than that for which the conductors are approved.

Section 4123, Outlet Boxes to be Covered: In a completed installation, each outlet box shall be provided with a cover unless covered by means of a fixture canopy, lampholder, receptacle, rosette, or similar device.

Section 4124, Covering of Combustible Material at Outlet Boxes: Any combustible wall or ceiling finish exposed between the edge of a fixture canopy or pan and an outlet box shall be covered with non-combustible material.

Section 4125, Connection of Fixtures: In general, fluorescent fixtures when supported independently of the outlet box shall be connected through metal raceways or armored conductors. This requirement may be waived when cord-equipped fixtures are suspended directly below the outlet box and the exposed cord is not subject to strain or mechanical injury.

Fixture Supports

Section 4131, Supports—General: Fixtures, lampholders, rosettes and receptacles shall be securely supported. A fixture which weighs more than six pounds or exceeds 16 inches in any dimension shall not be supported by the screw shell of a lampholder.

Section 4132, Means of Support: Where there is an outlet box, a gas pipe, or a fitting which will provide adequate support, a fixture shall be attached thereto; otherwise a fixture shall be supported as required by Section 3707. A fixture which weighs more than 50 pounds shall be supported independently of the outlet box.

Wiring of Fixtures

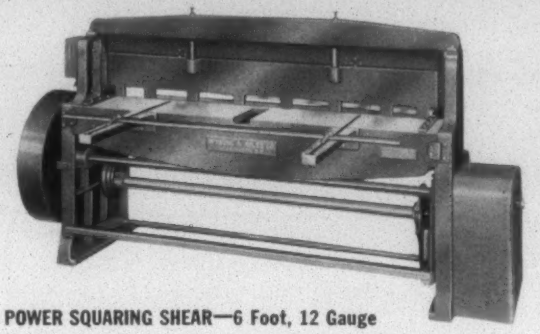
Section 4141, Fixture Wiring—General: Wiring on or within fixtures shall be neatly arranged and not exposed to mechanical injury. Excess wiring shall be avoided. Conductors shall be so arranged that they will not be subjected to temperatures above those for which they are approved.

Section 4142, Conductor Size: Fixture conductors shall not be smaller than No. 18.

Section 4143, Conductor Insulation: Fixtures shall be wired with conductors having insulation suitable for the current, voltage, and temperature to which the conductors will be subjected. Where fixtures are installed in damp, wet, or corrosive locations, conductors shall be of a type approved for such locations. For current-carrying capacity of fixture wire, see Table 3, Chapter 10. For maximum operating temperature and voltage limitation of fixture wires, see Section 3102.

Section 4144, Conductors for Special Conditions: Fixtures provided with mogul base screw-shell lampholders and operating at not more than 300 volts between conductors shall be wired with Type AF fixture wire. Fixtures provided with other than mogul base screw-shell lampholders and operating at not more than 300 volts between conductors shall be wired with Type AF fixture wire or Type AFC, AFPO, or AFPD flexible cord; except that where temper-

REDUCE MAINTENANCE OVERHEAD
with WYSONG & MILES SHEET METAL MACHINES



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Here is an economical power squaring shear with many precision features of more expensive machines. The precision, ball-bearing back gauge is adjustable to .0078 (1/128th) of an inch. The compensating hold-down has an individual spring actuated plunger in each foot . . . shears varying gauges without adjustment. The hardened steel, sliding key clutch has non-repeat unit for stopping shearing action after each cycle; can also be set for continuous shearing. High speed blades are standard equipment. ***Other Wysong and Miles Power Squaring Shears in 6 foot, 10 gauge; 8 foot, 12 gauge; 6 foot, 14 gauge and 52 inch, 14 gauge capacities.***

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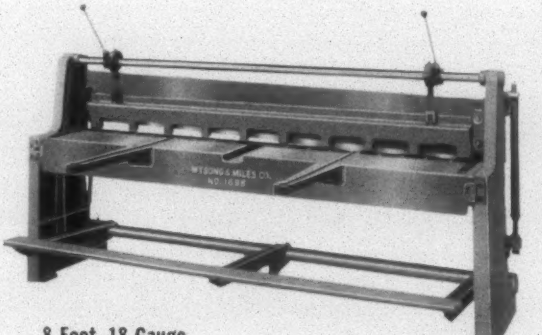

8 Foot, 18 Gauge

Ideal for shearing long sheets. Precision back gauge as decribed above is standard equipment. Hand operated holddown with self locking eccentrics holds sheets securely. Large tubular cross shaft gives uniform motion to cross-head regardless of where operator presses treadle. Compression springs raise cross-head after cutting operation, eliminating counterweights . . . ***other Wysong and Miles Foot Power Squaring Shears in 36", 18 gauge and 36", 42", 48", 52", 16 gauge capacities.***

• • •

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SQUARING SHEARS - BENDING ROLLS

atures do not exceed 90° C. (194° F.) Type CF fixture wire or Type CFC, CFPD, or CFPO flexible cord may be used. Where temperatures do not exceed 60° C. (140° F.), Type T thermoplastic wire and Type TF and TFF fixture wire, Type R rubber-covered wire, Type RF-64, RF-32, FF-64, and FF-32 fixture wire may be used, including use in fixtures of decorative type on which lamps of not over 60-watt rating are used in connection with imitation candles.

Section 4145, Conductors for Movable Parts: Stranded conductors shall be used on chain fixtures and other movable parts. Conductors shall be so arranged that the weight of the fixture or movable parts will not put a tension on the conductors.

Section 4146, Pendant Conductors for Incandescent Filament Lamps: Pendant lampholders with permanentaly attached leads, if used in other than festoon wiring, shall be hung from separate stranded rubber-covered conductors which are soldered directly to the circuit conductors but supported independently thereof. Such pendant conductors shall be not smaller than No. 14 for heavy-duty or medium-base screw-shell lampholders, nor, except for approved Christmas tree and decorative lighting outfits, smaller than No. 18 for intermediate or candelabra-base lampholders. If the pendant conductors are longer than three feet, they shall be twisted together.

Section 4147, Protection of Conductors: Conductors shall be secured in a manner that will not tend to cut or abrade the insulation. Conductors shall be protected from abrasion where they pass through metal. Exposed flexible cord or fixture wire shall not be used to supply permanentaly installed fixtures in show cases or wall cases.

Section 4148, Conductor Protection at Lampholders: Where a metal lampholder is attached to a flexible cord, the inlet shall be equipped with an insulating bushing which, if threaded, shall not be smaller than nominal three-eighths-inch pipe size. The edges of the bushing shall be rounded and all inside fins removed in order to provide a smooth bearing surface for the conductors. Bushings having holes $\frac{9}{32}$nds of an inch in diameter are suitable for use with plain pendant cord and holes $\frac{13}{32}$nds of an inch in diameter with reinforced cord.

Section 4149, Connections, Splices and Taps: Fixtures shall be so installed that the connections between the fixture conductors and the circuit conductors may be inspected without requiring the disconnection of any part of the wiring, unless the fixture is connected by means of a plug and receptacle. Splices and taps shall not be located within fixture arms or stems. No unnecessary splices or taps shall be made within or on a fixture. For approved means of making connections, see Section 1118.

Section 4150, Fixture Raceways: Fixtures shall not be used as a raceway for circuit conductors unless the fixtures meet the requirements of approved raceways, except that the conductors of a single branch circuit may be carried through an installation of fixtures approved for end to end assembly to form a continuous raceway.

This is a provision that has brought up a lot of discussion, since this provides for only the conductors of a *single branch* circuit to be run in the continuous wiring trough of a continuous row of fluorescent fixtures. The cause of the discussion has been a doubt in the minds of a great many people regarding the meaning or scope of "*Single branch circuit*," and, based on information which we have on an authoritative interpretation of the Code, the following explanation should clear up this question: A *single branch circuit* may be either a two-wire, 120-volt circuit from the lighting panel, or it may be a three-wire, 120/240-volt circuit from the panel, or it may be a four-wire, three-phase, 120/208-volt circuit, also from a single panel. All of which should help along the installation of continuous rows of fluorescent fixtures.

Some electrical inspectors are approving this method of wiring for lighting where the fixtures are joined together by conduit nipples not longer than 12 inches, where all of the wires pass through, from one fixture to the next. This will allow the use of standard fixtures with conduit knockouts in the ends in many instances. *Caution:* You'd better get this little matter cleared with your local inspector before you start such a job.

Section 4151, Polarization of Fixtures: Fixtures shall be so wired that the screw-shells of lampholders will be connected to the same fixture or circuit conductor or terminal. For polarity identification of conductors to screw-shells of lampholders, see Section 2004.

Lampholders

Section 4156, Lampholders, Screw-Shell Type: Lampholders of the screw-shell type shall be installed for use as lampholders only.

Section 4157, Double-Pole Switched Lampholders: Where used on unidentified two-wire circuits tapped from the ungrounded conductors of multi-wire circuits, the switching device of lampholders of the switched type shall simultaneously disconnect both conductors of the circuit. See Section 2007.

Now, here is where you must be very sure to follow these provisions if you have a three-phase, 120-volt lighting system, for there is much danger of a serious electric shock if the fixture gets grounded, and your man on the ladder grabs a pipe for support while in contact with the light fixture, and unless both wires are broken by the double-pole switch.

Section 4158, Lampholders in Damp or Wet Locations: Lampholders installed in damp or wet locations shall be of the weatherproof type.

Receptacles and Rosettes

Section 4161, Rating and Type: Receptacles installed for the attachment of portable cords shall be rated at not less than 15 amperes, 125 volts, or ten amperes, 250 volts, and shall be of a type not suitable for use as lampholders.

Section 4162, Receptacles in Floors: Receptacles located in floors shall be enclosed in floor boxes especially approved for the purpose, except that where such receptacles are located in elevated floors of show windows or other locations, where the authority enforcing this code judges them to be free from mechanical injury, moisture and dirt, the standard approved type of flush receptacle box may be used.

Section 4163, Receptacles in Damp or Wet Locations: Receptacles installed in damp or wet locations shall be of the weatherproof type.

Section 4165, Approved Types: Fusible rosettes shall not be installed. Separable rosettes which make possible a change in polarity shall not be used. For construction specifications, see Section 94104.

Section 4166, Rosettes in Damp and Wet Locations: Rosettes installed in damp or wet locations shall be of the weatherproof type.

Construction

Section 4171, Combustible Shades and Enclosures: Adequate air space shall be provided between lamps and shades or other enclosures of combustible material.

Section 4172, Portable Handlamps: Handlamps of the portable type supplied through flexible cords shall be of the molded composition or other type approved for the purpose. Brass-shell paper-lined lampholders shall not be used. Handlamps shall be equipped with a handle. Where subject to mechanical damage or where lamps may come in contact with combustible material, handlamps shall be equipped with a substantial guard attached to the lampholder or the handle.

Section 4173, Marking: All fixtures requiring ballasts or transformers shall be plainly marked with their electrical rating and the manufacturer's name, trade-mark or other suitable means of identification. The electrical rating shall include the voltage and frequency, and shall indicate the current rating of the unit including the ballast, transformer or auto-transformer.

Flush and Recessed Fixtures

Section 4176, Approved Type: Fixtures which are installed in recessed cavities in walls or ceilings shall be of an approved type and shall conform to Sections 4177 to 4180 inclusive.

Section 4177, Temperature: Fixtures shall be so constructed or installed that adjacent combustible material will not be subjected to temperatures in excess of 90° C. (194° F.) Where a fixture is recessed in fire-resistant material in a building of fire-resistant construction, a temperature higher than 90° C. (194° F.), but not higher than 150° C. (302° F.) is acceptable if the fixture is plainly marked that it is approved for that service.

Section 4178, Clearance: Recessed portions of enclosures, other than at points of support, shall be spaced at least one-half of an inch from combustible material.

Section 4179, Wiring: Conductors having insulation suitable for the temperature encountered shall be used. Where conductor temperatures are in excess of 60° C. (140° F.), conductors shall be brought through at least four feet of metal raceway from the fixture to an outlet box at least one foot from the fixture. Such conductors, unless approved for the purpose, shall not extend a distance of more than six feet from the fixture as measured along the raceway.

Section 4180, Construction: For the construction of flush and recessed fixtures, see Section 94105.

Materials Handling

Unit Loads—Handling, Shipment, Storage

According to the Electric Industrial Truck Association, the unit load principle is axiomatic—the more pieces or pounds moved in a single handling operation, the lower the cost per piece or pound and the shorter the time required to move any given volume. The illustration on Page 154 shows the economies of the unit load systems of industrial materials handling as compared with manual methods more vividly than they could be described in writing. It deserves careful study.

Note that the fictitious ABC Mfg. Co. eliminated six manual, piece-by-piece handlings of goods through full use of a unit load system in receiving, shipping and warehousing operations alone. The XYZ Warehouse eliminated all (four) manual piece-by-piece handlings by maximum use of the system. Upon reflection it will be discovered that the omission of the pallet when loading goods into cars would have lessened the economies (measured by manual handlings eliminated) one-third and one-half, respectively.

The following are some of the advantages to be gained through proper employment of a unit load system, either alone or in combination with other industrial truck systems: (1) substantially lower handling costs; (2) rapid movement of goods; (3) modern packing methods, fundamental to applying a unit load system, usually reduce costs; (4) maximum utilization of storage space; (5) reduction in product damage; (6) enhancement of employee safety; (7) reduced time and cost of taking physical inventory; and (8) reduced time for loading and unloading railroad cars and motor trucks.

Historical

There are two systems (using different types of self-loading industrial trucks) employing the unit load principle—the lift truck skid platform system and the fork truck pallet system. Each has its advantages when properly applied — the former primarily within manufacturing plants, while the latter has a broader field since it is ideal for warehousing most goods and is rapidly gaining use in shipping.

In 1915, the first "self-loading" type electric industrial truck—the low-lift platform truck (followed by the hand-lift truck)—was developed to lift material loaded on skid platforms in industrial plants and move them from one point to another about the plant. Usually, a pre-determined number of pieces comprise a skid-load with the lift truck skid platform system. As pieces are processed, they are reloaded by the machine operator on another skid.

While the lift truck skid platform system was originally designed for internal industrial plant transportation, the idea soon was applied to inter-plant shipments and, by one or two industries, to the shipment of finished product. However, the relatively high cost of skids, the problem of their return, and, particularly, a lack of standardization of skids were deterrents to its general application in shipping; also, the fact that some commodities when loaded on skids could not be tiered without damage because of the concentrated bearing weight of the runners on the load below. The lift truck skid platform system, however, is still absolutely sound in principle, economical, and in extensive use when the job involves movements from one point to another and tiering is not a major factor.

The Fork Truck

Efforts to improve the handling of tinplate—in process and during packaging, carloading, and shipment—resulted in the development in 1919 of the fork truck. This type truck revolutionized the packaging and handling of the product and later resulted in the development of today's accepted practices and methods in that industry.

The success of the fork truck in the tinplate industry contributed substantially to the development of the fork truck pallet system. Since the forks, which lift the load, overhang one end of the truck, they can be lowered to the floor. Pallets on which goods are piled, therefore, need only have one-third to one-half the minimum height of skids. Their lower underclearance (which precludes a lift flatform truck getting under them), as well as the distribution of the load weight over a greater area when double-faced pallets are used, is most advantageous in tiering. Too, pallets may be constructed more cheaply than skids. For boxed or crated goods, pallets are unnecessary; all that is needed is to attach inexpensive batten strips to the bottom. Baled goods, drums and barrels are examples of packages which may be picked up without the use of pallets. Usually, however, it is more efficient to stack these products on pallets for tiering.

The two-wheeled stevedore hand-truck is generally considered the tool best suited for manually handing materials. The power fork is actually only a mechanized stevedore hand-truck of greater capacity and speed, plus the advantageous feature of elevating and tiering loads.

Most fork trucks now in service have uprights which telescope to give an over-all height of 83 inches. This enables trucks to be employed in loading and unloading freight cars, as well as to operate through normal height doors. In warehousing, the uprights may be extended to permit forks to travel to a height of nine or ten feet. The height of tiering depends upon the strength of packages to withstand superimposed loads, as well as floor load capacity.

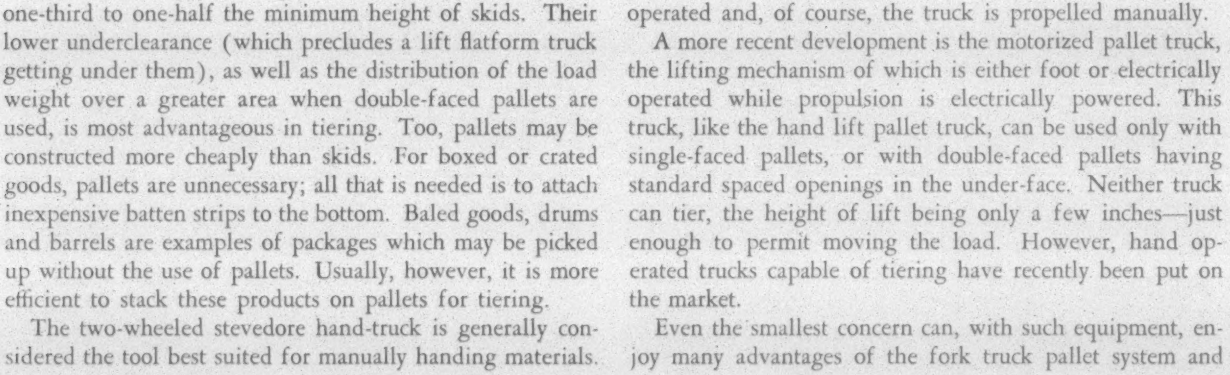
Fork trucks are adaptable to handling most any type of package and even some bulk products. Frequently the change-over requires no mechanical skill and is done quickly and easily by the truck operator. A fork truck may be equipped with any one of a number of kinds of forks, the choice depending upon the characteristics of the material to be handled. The pallet type fork, as its name implies, is intended for handling pallets or "palletized" loads. While some packages not on pallets or "palletized" may be picked up with regular pallet forks, usually a chisel type fork is used for such service. The two forks on trucks are adjustable sidewise. When extra long loads are sometimes handled with regular pallet forks, there are fork extensions available which fit over the regular forks.

Hand or Foot-Lift Trucks

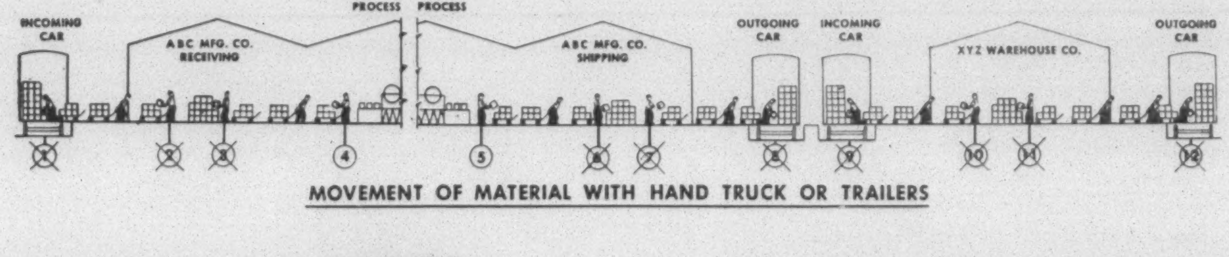
For handling small volumes of pallet or "palletized" unit loads where tiering is not involved, or for short moves in conjunction with power fork truck operations, hand lift pallet trucks are available. The lifting mechanism is hand operated and, of course, the truck is propelled manually.

A more recent development is the motorized pallet truck, the lifting mechanism of which is either foot or electrically operated while propulsion is electrically powered. This truck, like the hand lift pallet truck, can be used only with single-faced pallets, or with double-faced pallets having standard spaced openings in the under-face. Neither truck can tier, the height of lift being only a few inches—just enough to permit moving the load. However, hand operated trucks capable of tiering have recently been put on the market.

Even the smallest concern can, with such equipment, enjoy many advantages of the fork truck pallet system and



MOVEMENT OF MATERIAL WITH HAND TRUCK OR TRAILERS



MOVEMENT OF MATERIAL WITH PALLETS AND FORK TRUCKS

Comparison of manual method and unit load systems.

also make it possible for the larger operator (either his customer or supplier) to employ the system fully, to the mutual advantage of all concerned—the shipper, carrier, receiver, and the ultimate consumer.

Combination Systems

Fork trucks are most efficient for hauls of relatively short distances. When distance is a factor it is more economical to combine the tractor trailer system with the fork truck pallet system, using the latter for handling pallets on and off trailers. If a tractor is unavailable for long hauls, the fork truck may be equipped with a manual or automatic coupler and used to haul several trailers it has first loaded with pallets. Arriving at its destination, the fork truck, which carries a load on its forks, uncouples and disposes of its load and then unloads the trailers.

The fork truck pallet system may also be combined effectively with the lift truck skid platform system, the former to perform receiving, shipping and warehousing services, and the latter for movements through manufacturing processes. While fork trucks can handle either skids or pallets, elevating platform trucks cannot efficiently handle pallets, unless the loaded pallets are placed on skid platforms.

Pallets

Since pallets are essential to an elimination of costly repetitive manual, piece-by-piece handlings of goods in their movement from the producer to the consumer, the choice of the proper type of pallet for a given service, as well as its design and construction are all deserving of serious consideration.

A peculiarity of pallets which causes confusion is the fact that the smaller dimension (which normally would be considered the width) is actually the length, from the standpoint of the forks required to handle the load. The reason for this is the fact that the load is carried outboard, and the nearer the center of gravity the load is carried to the adjacent axle, the greater the truck's stability and the lower the weight of the truck.

Pallet Design and Construction

Generally speaking, a single-faced disposable pallet has been used for shipping purposes, to obviate the need for returning the pallet. For usage around a manufacturing plant, for warehousing, or stevedoring (particularly when tiering is necessary) a double-faced pallet is better adapted. To expedite handling, the under clearance in the case of the single-faced pallet, or the opening between faces of the double-faced pallet, should not be much less than four inches. The upper-face of double-faced pallets may be spaced or solid. It is advisable to have the lower-face with standard spacings, to accommodate the wheels of hand or foot lift pallet trucks. Immediately adjacent to the first and last boards in the lower face (which should always have a width of six inches) should be openings eight to 8½ inches wide. Regardless of the type of truck used to handle pallets, it is recommended the overhang beyond the fork length not exceed six inches.

Pallets are usually made from soft woods such as long or short leaf pine, Douglas fir, hemlock, spruce, chestnut, or white pine. For heavy-duty pallets, hard woods such as beech, birch, maple, red, white, or Southern oak, and tupelo gum are desirable. Three runners about two inches by four inches are needed for each pallet. Top and bottom boards should be free of splits or rotten knots; sound knots less than 1½ inches in diameter and at least one inch from the edges are not so undesirable as to cause discarding material. Boards for upper and lower faces should be of commercial stock one inch by not less than five inches nor more than eight inches—with six-inch widths for all first and last boards.

For putting pallets together, cement coated nails have been found satisfactory; 8d or 10d straight hardened steel nails with blunt points or 2½-inch flat-head screw nails with chisel points should be specified. Six or eight nails per board, depending upon the width, two on each runner and when the width of the board permits three on outer runners, are ample.

In assembling heavy-duty stevedore pallets, the runners at each side are placed so the upper and lower-face boards overhang the runners, usually with outside corners cut off at a 45° angle and the boards on the outer edges of the pallet chamfered to protect cargo, particularly bagged goods, from damage. Usually such pallets have been put together with counter-sunk bolts and nuts, notwithstanding the fact that counter-sinking weakens the boards. To overcome this, there is now on the market a patented pallet made in two sections. Two single-faced pallets are put together with ordinary clinched nails. The two sections are then fastened together with spikes or bolts. Too, pallets with extensible sections are available.

Training New Operators

New operators, given reasonable opportunity to practice, soon become adept at inserting forks into the pallet openings, elevating, and tilting the load back sufficiently to balance loosely stacked goods against sudden stops simultaneously with control of truck travel. Skill will also be acquired quickly in spotting loads in storage by tilting the forks forward. As a safety precaution, loads should not be elevated more than a foot or two while the truck is traveling at anything near normal speed. Elevating for tiering can be done just as the truck nears destination and after speed has been greatly reduced. When the upper reach of the truck is attained in tiering, if load weights are not excessive, it is possible to tier the height of one additional pallet load by double stacking at floor level and elevating and placing the double load into storage position.

Importance of Pallet Standardization

Pallet standardization is stressed because of a conviction that such a program is essential if the fork truck pallet system is to make the contribution toward lower distribution costs of which it is potentially capable. As already indicated until a fork or pallet truck owner's in-bound and out-bound shipments—in addition to his internal handling operations are in unit loads, he is passing by opportunities for substantial cost reduction.

In adopting this system, the rental of pallets, from pallet pools, at low cost, would be very effective in stimulating the use of the system and reducing distribution costs. The failure to standardize skid platforms years ago should not be repeated with pallets because it is obvious that every additional size pallet injected into the picture will complicate the initiation of a pallet pool and be an obstacle to the general use of pallets in shipping. With that in mind, it would be most desirable to standardize on a few pallet sizes having the broadest application. Such a standardization program must be controlled, to a large degree, by loading widths of railroad cars and highway trucks.

Not the Universal "Cure-All"

As pointed out earlier, the lift truck skid platform system and the fork truck pallet system each has its advantages, if properly applied. This is true, too, of other industrial truck systems. When the job is simply transporting a limited number of loads from one point to another over long distances, the non-elevating platform truck would be the logical choice. On the other hand, where both volume and distance are factors, the tractor trailer system would be the best choice.

When the job is merely the movement of loads for relatively short distances, where tiering is not involved, the low lift platform truck skid system is most economical on a cost per ton basis. When tiering is involved, provided the product may be tiered on skids without damage, the high lift truck logically would be chosen.

Bleaching, Dyeing & Finishing

SCREEN PRINTING

By FRANCIS TRIPP, B. Sc., M. S., Ch. E., Head of Chemistry Department, New Bedford (Mass.) Textile Institute

DURING the past quarter century, the screen printing of textile fabrics has evolved from practically an unknown art to what is now a lucrative and well established phase of our enormous textile industry. In practically every textile center it is possible to find from one to a half-dozen plants engaged in the business of screen printing.

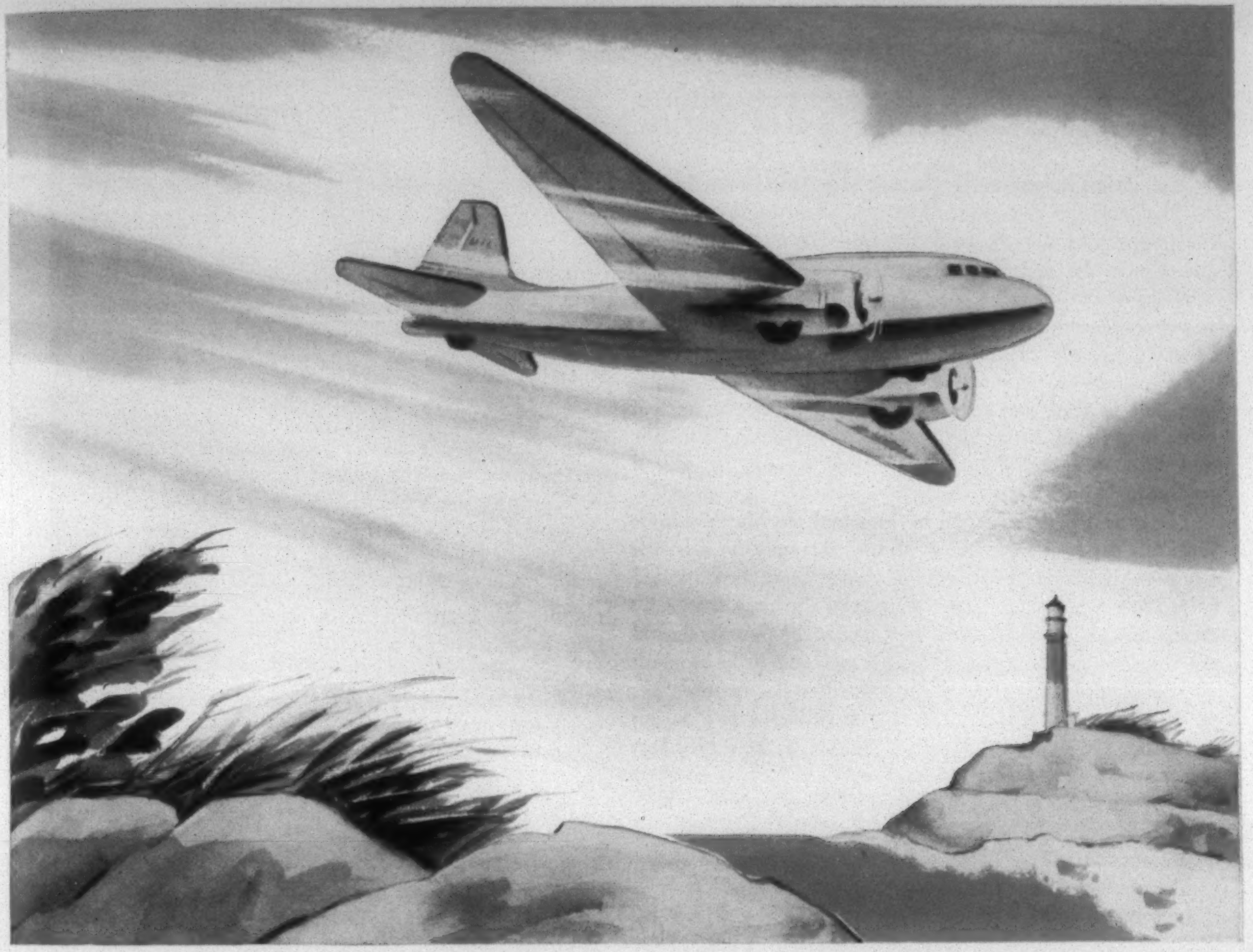
The increased popularity and accelerated growth in the hand printing of textile materials can be attributed to several factors. Because of the small amount of space required to operate on a profitable basis, we find many small printing concerns operating in conjunction with other phases of textile industries by the utilization of what was formerly surplus floor space. Other screen printing establishments can also be found in garrets and buildings, that in many cases, were unused for many years. The larger plants employ entire buildings and offer interesting and profitable employment to many people in the community.

The capital required to establish a plant for screen printing is small in comparison to the investment required for roller printing. The cost of producing the screens used in the screen operations is meager compared to the capital required for purchasing and engraving rolls for roller printing. It is therefore possible to screen print limited yardages of material at a profit, whereas in the roller printing process, a large volume of production must be forthcoming to offset the initial investment. Another important factor, when making comparisons, is that the size of the design in roller printing is limited to the measurements of the circumference of the printing roll, whereas in screen printing, the screens can be made any size. Larger designs or repeats are therefore possible in screen printing than in roller printing. Screen prints are also attractive because of their unusual brilliance or sparkle. The terms screen printed, hand printed or hand screened hold definite attractiveness to the consumer.

Many concerns operate on the basis of printing limited yardages of an exclusive design, therefore obtaining higher prices for their merchandise in return for the often sought exclusiveness demanded by the consumer. During the course of the past few years *Life* magazine featured some of the productions of Brooke Cadwallader and his famous "limited edition" scarves. Other textile materials now screen printed in large volumes are handkerchiefs, table cloths, draperies, neckties, banners, napkins, materials for dresses, blouses and shirts, polo and sweat shirts and many other diversified articles of wearing apparel.

During the past several years, the students at New Bedford Textile Institute have been producing some beautiful hand printed scarves, neckties, handkerchiefs and dress materials in conjunction with their courses in designing and textile printing. The original designs are painted on cardboard or heavy paper and the screens are made following color pattern of these designs. A separate screen has to be made for each color in the original design.

Printing screens are made of wood, usually pine or cedar. In the preparation of screens, pieces about two and one-half by one inch are cut to the desired length and the strips are fitted to form a frame. The frames are either reinforced by angle irons or dovetailed at each corner, in order to provide a sturdier frame. The frame is made somewhat larger and wider than the design, in order that the screen may contain a "color-box" to hold the printing paste prior to and during the intervals between repeats. Silk bolting cloth is stretched taut over the frame. The silk is shrunk and dried on the frame before the pattern is applied. No. 10 mesh silk has proved adaptable for printing at the institute and may be purchased from the suppliers of screen printing materials. Nylon and vinyon material may also be utilized successfully in the production of screens. Two screws, one near each corner, are screwed into the outside edge of one side of each screen and allowed to protrude about two inches horizontally. An angle iron is fastened



Flying with a tail wind

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near one corner on the top edge of the screen containing the screws and allowed to protrude outward about four inches.

The design is fastened to the printing table in the desired position and the first screen is placed over the design with the two screws against an angle iron rail that runs along one edge of the printing table for its entire length. A clamp is also fastened to the table rail and the angle iron on the screen is placed firmly against this clamp. Wherever one color (i. e., red) appears in the design, it is outlined with India ink on the fabric of the screen. A second screen is prepared in the same manner as the first and the second color is outlined in a similar way. If the design contains five different colors, then five separate screens are placed on the table and traced.

The screen is then turned over so that the under side or "face" is exposed. Dextrin is poured carefully on the face along one edge of the screen. The dextrin is then applied across the entire face of the screen in one easy stroke by means of a squeegee. It is important that the dextrin should not run through the mesh of the silk and appear as blotches on the opposite side. In order to get the proper viscosity, we have found it practical to fill an ordinary one gallon jar to the shoulder with dextrin. Water is then added to the top and stirred into the dextrin. The dextrin is then allowed to stand about 24 hours and then strained. It is now ready for application to the screens. The dextrin requires about one-half hour to dry and should not be tacky.

The squeegee for applying dextrin can be made from a thin piece of wood with dimensions about three inches by one-sixteenth of an inch. The long edge or working edge is tapered and then smoothed. It is then cut to the length that is approximately equal to the width of the screen. It is then reinforced along the non-tapered edge by fastening to it a piece of wood about 1¾ inches by three-quarters of an inch.

After the dextrin has dried, the screen is ready for the next operation which consists of applying the "resist." As previously mentioned, the part of the design to be printed has been outlined with India ink. The screen is placed on a flat surface and the "resist" is carefully applied by brush to the outlined portions on the side of the silk, which was not covered with dextrin. A practical formula for preparing the "resist" can be made by dissolving about a half teaspoonful of an alcohol-soluble dye in a small amount of alcohol. The dye solution is then added to one pint of tincture of green soap containing a teaspoonful of LePage glue. The "resist" can be thinned to the desired consistency by adding more alcohol.

Screen printing at New Bedford Textile Institute.

A caustic resist paint is next spread over the entire surface of the screen covering the "resist." During the application of the caustic resist paint, the silk should not touch any surface. This can be accomplished by supporting the edges of the screen with wooden blocks. The paint should not be applied too thickly and is best applied by two or three very smooth strokes with the same type of squeegee as used in the application of the dextrin.

After the paint has dried, the screen is washed using warm water. The dextrin surface is washed first and then the reverse side of the screen, using hot water in conjunction with rubbing the paint gently with a cloth. In this manner the "resist" is rubbed away, carrying with it portions of the caustic resist paint. The open section of the screen now represents the design. The screens are next given a second coat of paint around the edges of the framework and taped along each edge with wide strips of adhesive tape so as to prevent any leakage of color paste where the silk is fastened to the wooden frame.

The profilm method is widely used in making screens. Profilm is a transparent stencil consisting of a lacquer or shellac film adhered to a backing paper. It can be purchased by the yard from the supply houses and comes in a variety of colors. The stencil is placed directly over the design and the sections where the desired portions appear are traced with a sharp film knife and stripped away from the lacquer film and backing paper. After all the sections of the design representing one color have been stripped off, the silk screen is placed over the lacquered portion of the stencil and an adhering solvent is gently applied with a cloth causing the profilm to adhere to the silk. The backing paper is then stripped away and the film containing the design remains cemented to the fabric. Since the profilm is usually cut smaller than the frame, it is necessary to fill in the outer edges of the screen with a lacquer. Certain types of profilm may also be purchased which can be adherred to the silk by use of a hot flat iron.

A very popular and efficient procedure of making screens is by the photographic method. The screen surface is coated with a light sensitive gelatin solution of ammonium bichromate. The original design is traced and filled with opaque ink on a transparent acetate sheet especially designed for this work. The acetate sheet containing the design is placed over the gelatin coated screen and exposed to a photo-light. The opaque or black portions of the design prevent the passage of light through the transparent acetate sheet and in these portions of the coated screen the gelatin remains soluble. However, where the light has passed through the acetate sheet and has come in contact with the sensitized gelatin on the screen, the gelatin is rendered insoluble. The screen then can be washed to remove the soluble portion and the insoluble gelatin portion can be covered with a lacquer or paint to improve its wearing qualities. A "positive" may also be made by photographic methods for each color on the design and placed over the screen

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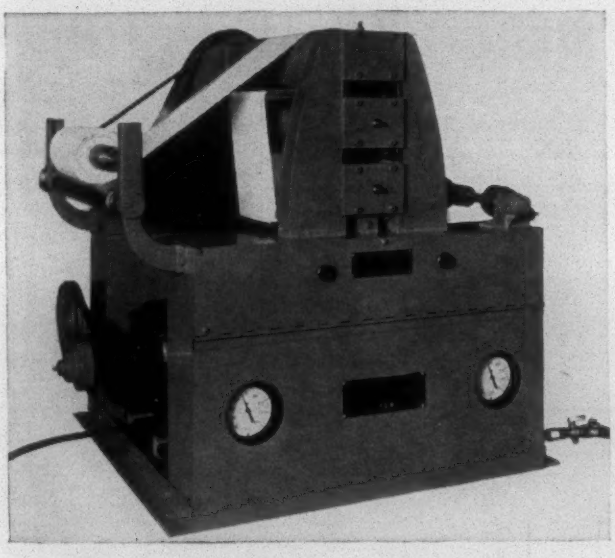

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which is coated with the sensitized gelatin solution as described above.

I. G. Farben during the war introduced polyvinyl alcohol containing ammonium bichromate in place of the commonly used sensitized gelatin solution for making screens by the photographic process. This material can be hardened after exposure to light and washing, using a mixture of Isobutyraldehyde and Acetaldehyde producing a very resistant coating on the screen.

Such materials as silk, vinyon, nylon and organdy (cotton) used in making screens have been replaced to some extent by the use of phosphor bronze wire cloth. This material has been recommended as particularly desirable for the preparation of screens by the photographic method, since it is possible to reclaim the screen after printing. It has been reported that fine copper gauze is used in large quantities for the making of screens in Germany.

The squeegees used to carry the color paste, during the printing process, are made of wood and are five inches wide, three-quarters of an inch thick and cut to fit the inside of the screen. The squeegees are tapered along one of the long edges to about three-sixteenths of an inch. Oftentimes rubber-edged squeegees are used in place of the wooden squeegees. A sharp-edged rubber squeegee will produce a clean sharp print.

The tables used in printing operations are made of heavy wooden or metal frames with tops constructed of seasoned wood, metal or plastic. The length of the tables vary from a few yards to 100 yards in length, depending on the size of the printing plant and its operations. The width of the tables may vary from four to six feet and the height is approximately three feet. It is essential that the table tops be of solid construction with a very level surface, so as to prevent uneven printing. In many cases the tables are heated by means of steam pipes that are placed under the table tops and run the entire length of the table. Some plants use hot air blown on the printed cloth or infra-red lights as aids in drying. Experimentation with electrically heated blankets as drying aids is also in progress.

A heavy felt, varying in thickness from five-eighths to three-quarters of an inch is used to cover the surface of the table, and over this is fastened a back-grey of heavy sheeting. In other instances an oilcloth is used to cover the felt padding in place of the cotton back-grey.

As previously mentioned, along one edge of the table, running its entire length, is fastened an angle iron one edge of which protrudes about three inches above the level of the table. The printer places the screen against it during the printing operation. Adjustable stops with thumb screws are fastened to the angle iron at the proper intervals for the entire length of the table. The angle iron attached to each screen is placed against each stop prior to printing and in this manner the correct blending of the original design is insured after all the colors have been printed. *(To be continued.)*

Tensitrol—Its Development And Application

ELIMINATION of tension upon fabrics during wet processing has been made possible by Tensitrol, a principle worked out and announced recently by Rodney Hunt Machine Co. of Orange, Mass.

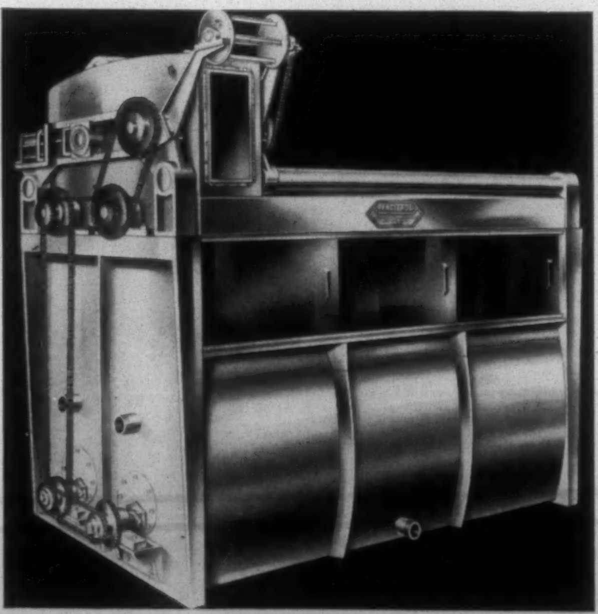
Based on a theory arrived at after years of careful study, a model was built in the Rodney Hunt research laboratory by using a simple roller conveyor.

On this model, the top rollers were idlers while the bottom rolls were driven at a speed considerably higher than that of the driven exit squeeze rollers. Cloth was run through continuously at speeds up to 200 yards a minute. One of the top rolls was made movable. Lifting it gave the effect of stretching the cloth and putting tension on it. Dropping it back into place simulated stretching and put slack into the cloth. It was found that, regardless of the amount of shrinkage or stretch, the cloth was invariably in a totally relaxed and tensionless condition.

To produce this condition, it was found necessary to have the bottom rolls all driven at a speed in excess of the speed of the exit squeeze rolls, this excess speed to be a certain percentage greater than the maximum amount of shrinkage that could ever occur in a fabric. In other words, without any change in speed of any moving part of this machine, cloth could run through at any speed and remain constantly in a tensionless condition.

Experimental work proceeded, with the first application to continuous dyeing. It was felt that in the Tensitrol invention, a method had been found at last for dyeing continuously any fabric from woolens or worsteds to cottons, silks and rayons—all without tension.

As research proceeded, a significant problem developed



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which in itself was further proof of completely tensionless operation. The cloth was discovered to be so completely tensionless that the slight adhesion of wet cloth to a smooth surface caused it immediately to wind up on the bottom rolls. Special rolls were developed after considerable study which overcame the problem of adhesion. With their use, the machine remained tensionless and the tendency of the cloth to wind on the bottom rolls vanished. It was also recognized that fabrics in the machine might have a tendency to wrinkle or fold because they were in such a tensionless condition. Designs were perfected to give a spreading action and thus assure that the cloth would stay constantly at full width in a perfectly flat, smooth condition.

Application to Continuous Dyeing

The implications of the Tensitrol principle to the textile industry as a whole were quickly realized. Initially, one of the nation's greatest woolen mills, after thorough investigation, immediately ordered a complete stainless steel dyeing pilot plant which is now being used to establish formulas and procedures for continuous dyeing of woolen and worsted fabrics.

Commonly accepted practices were followed in constructing the pilot plant. There is a padding unit, then a developing chamber of considerable holding capacity to provide the necessary time element, a squeeze roll for extraction, and finally a conventional washing operation. Individual troughs for the bottom rolls were constructed to provide unusual flexibility. By merely filling the troughs, a short volume of dye bath is obtained; on the other hand, the liquor level can be raised considerably to give a greater volume.

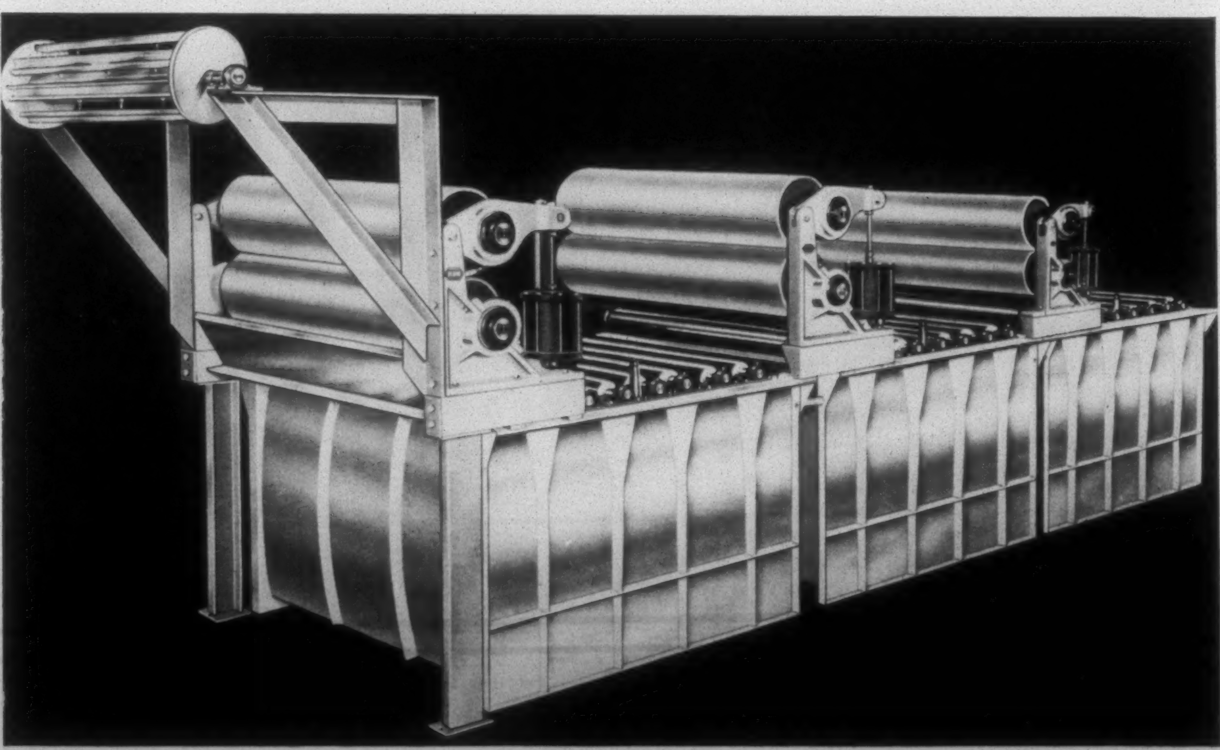
While it had been realized that it had been possible from the start to supply similar equipment generally for tensionless and continuous dyeing, the length of time it would take for individual plants to experiment and arrive at correct formulas and procedures served as somewhat of a deterrent. A second development is fortunately helping to solve that problem.

A division of one of the principal chemical firms in this country became interested in the possibilities of the Tensitrol principle, sent representatives to the Rodney Hunt plant who spent long hours investigating the theory and its application. The conclusion from this impartial source was that this equipment could be used for continuous dyeing of every known fabric from woolens and worsteds to cottons, rayons and silks. Further, it was concluded that it could be used for almost all classes of dyestuffs. The chemical firm then ordered a complete pilot dyeing machine. Determination of procedures for continuous dyeing using the Tensitrol method will take time, but it is apparent that the results will be made available as quickly as possible and that individual mills will thus have been spared the not inconsiderable expense that accompanies such experimentation.

Application to Open-Width Washing

Anxious to prove the Tensitrol principle in actual plant operation, the Rodney Hunt organization then was authorized to construct a continuous open-width washer utilizing the new method, for one of the world's largest rayon manufacturing organizations. That washer was installed many months ago and has been operating steadily and with complete success since that time.

This operation has been of the utmost importance in proving the practicability of the Tensitrol principle, as well as the action of the spreading mechanism. The plant in which the washer is operating handles a great variety of rayon fabrics of which a large proportion are acetates, both



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filament and spun. In these many months of operation, there has been no case of damage to any of these delicate fabrics in the washer. Exhaustive, painstaking tests at this plant have shown fabrics entering the water in a completely relaxed condition remain that way throughout the washing process. There is no elongation whatsoever and, therefore, no tension on the fabric.

This same manufacturer then ordered a large five-box open-width Tensitrol washer for continuous washing of rayon print fabrics—an operation heretofore impossible because of the tension imposed upon the fabrics. Further, this same mill ordered a third open-width Tensitrol washer for one of its plants in another section of the country, and has under consideration construction of a finishing machine of a special nature in which the Tensitrol principle is expected to be of marked advantage.

Still another continuous Tensitrol open-width washer is under successful operation in a Connecticut plant specializing in print fabrics. Here on rayon prints the mill operators are obtaining 15 per cent shrinkage on spun rayon prints and ten per cent on French crepes—conclusive evidence that the fabrics are in a completely tensionless condition throughout the washing operation.

Application to Rope Washing

Again, in the field of continuous peroxide bleaching, the Tensitrol principle has been successfully applied to a rope washer in which fabrics may be processed at speeds faster than 300 yards a minute. These fabrics include knit goods, which call for an absolute minimum of tension.

The bottom rolls in this washer carry 60 strands of roped fabric. Again, the bottom rolls are driven at a speed, compared to the speed of the exit squeeze rolls, a certain percentage greater than the maximum amount of shrinkage that can occur. Instead of a single idler top roll, 30 individual and freely-rotating spools revolve on the shafts. Successful application of the Tensitrol principle was made first on a full-sized laboratory machine. Then a full-sized finished machine of stainless steel was completed and tested on all types of fabrics. This finished machine is actually two machines in one. It carries two bottom rolls, each carrying 30 individual strands, for a total of 60 strands for the entire machine.

Developed primarily for high-speed production in continuous bleaching, it has many other uses. Its application is highly desirable on any washing problem where tensionless operation is a factor. Also, it is believed that, for the first time, the Tensitrol method has made possible a high-speed machine which is completely trouble-proof and which can be used for the soaping of rayon fabrics in rope form.

Tensitrol Principle of Operation

An understanding of the Tensitrol principle can be gained by considering a roller conveyor consisting of a series of idler top rolls, driven nip rolls at the discharge end of the conveyor, and a series of bottom rolls driven at a surface speed a definite percentage greater than the surface speed of the nip rolls. The material, then, is delivered from the Tensitrol unit at the surface speed of the nip rolls.

Each bottom roll, driven at a higher surface speed, moves the material forward as long as the material is under the exceedingly small tension necessary to give the roll traction. Balanced conditions then exist when the material is moving forward under minimum tension and the bottom rolls are slipping on the material an amount exactly equal to the difference between the bottom roll surface speed and the speed of the material.

If the material at any point in the machine tends to stretch, the tension on the material will be slightly reduced, diminishing the bottom roll traction, increasing the rate of slip, and therefore slowing down the material speed slightly to compensate for the stretch in the material. Conversely, if the material tends to shrink at any point, the tension on the material will increase the traction of the bottom roll, the rate of slip will be reduced, and the speed of the material will be increased immediately to prevent elongation of the cloth.

In brief, then, the Tensitrol principle, which has been proven in plant operation under impartial and critical tests, means that for the first time in the history of the industry, delicate fabrics can be processed at any speed in absolutely tensionless condition. Application of the principle is now available in standard units in both open width and rope washers, but further Tensitrol machines, for which patents have been allowed and other patents pending, are under development in other processes in the textile finishing field.

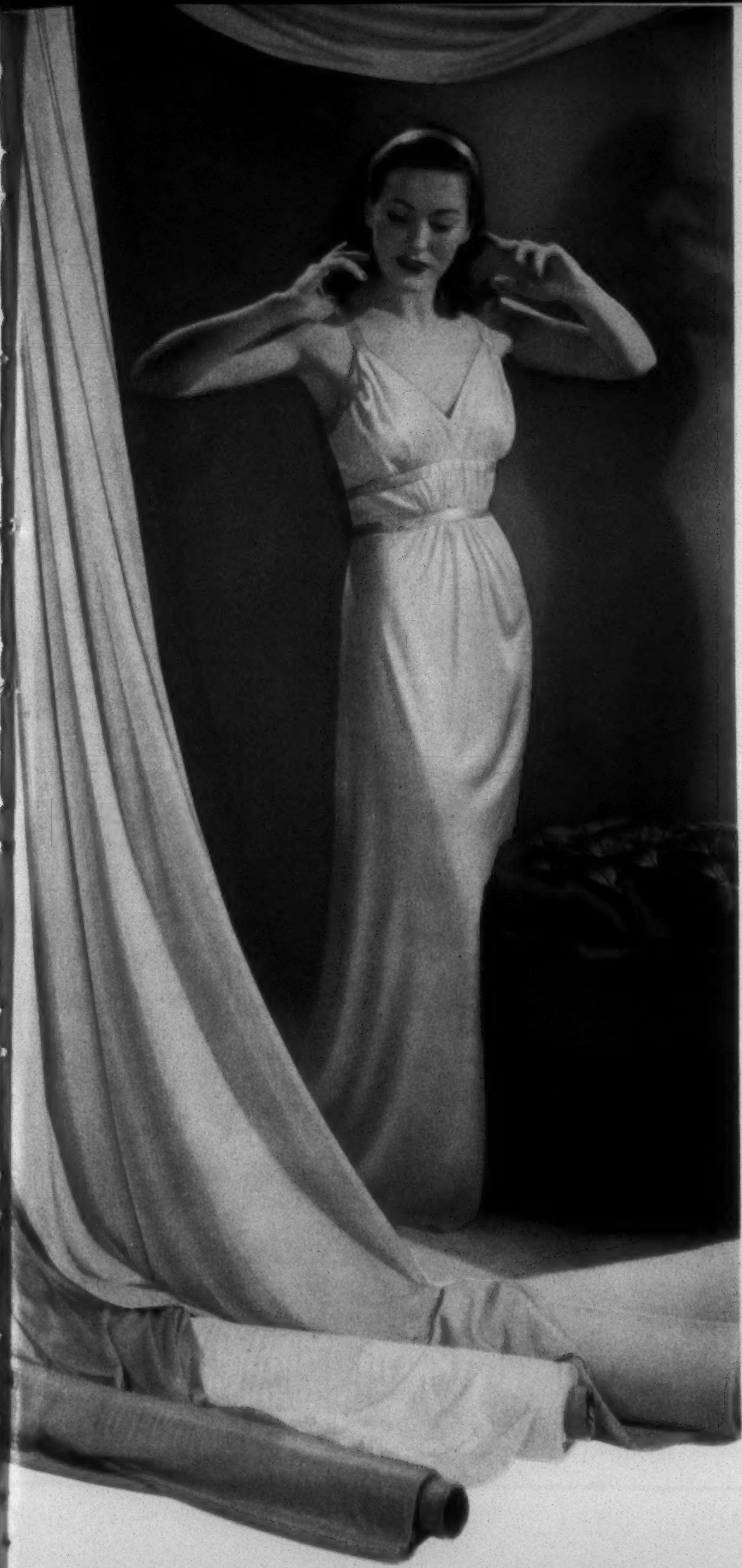
According to F. W. Warrington of F. W. Warrington Co., Charlotte, N. C., Rodney Hunt's Southern agent, a number of Tensitrol units will soon be in operation in the South. Dan River Mills, Inc., Danville, Va., has purchased 14 washers. Appleton Mfg. Co. at Anderson, S. C., has ordered a complete bleaching range, including four Tensitrol washers. A washer will be installed at Hartsville (S. C.) Print & Dye Works.

THE ROR PROCESS

THE new and quite novel method of impregnating fibers in the form of rovings, yarns, weaves and mats, is being practiced today by its owners, Ror Process, Inc., at their Greensboro, N. C., plant.

As a result of over 14 years of research work the inventor, Roger Cutler, discovered and patented the impregnation of fibers by water-borne emulsions of resins by a process which opens the fibers more readily to penetration, and, at the same time, rolls and pushes forward the fibers so penetrated. This he clearly describes as the action of rubbing between the palms of the hands any ductile substance such as putty, moss, textile fibers, semi-liquid emulsions, softened synthetic, or natural, resins, etc. This the patent office, to differentiate it from any known patent or patent application, describes as the difference—in aviation terminology—between a pusher type plane and a tractor type plane.

An excellent example can be visualized in the photo-



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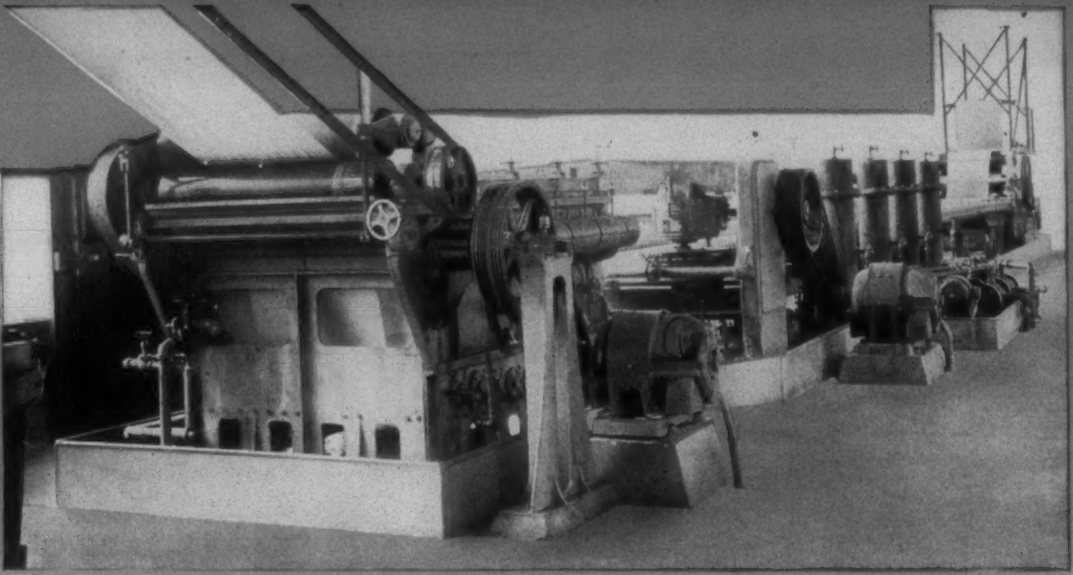

Butterworth Mercerizing Range at Riegel Textile Co., Trion, Ga. Starting at the far end: Cloth enters 3-roll Padder for impregnation with chemicals, passes into high-speed Mercerizing Tenter equipped with new overhead drive, and then into a Recuperator that strips caustic off fabric, recovering it for re-use. Cloth is finally folded onto hand trucks for delivery to Washers.

No "Over-Age" Machines in this High-Speed Range

Study the high-speed Mercerizing Range illustrated above—cloth moving at speeds up to 100 yards per minute, the latest type Butterworth Machines engineered to give the desired finish. The speed and efficiency of the entire range depends upon top-notch performance of each machine.

Start with the 3-Roll Butterworth Padder where cotton fibres are thoroughly impregnated with caustic. Electrically driven from steel roll in middle. Top and bottom rolls are rubber.

Then consider the high-speed Butterworth Mercerizing Tenter equipped with the new overhead drive. Modern width and speed indicators allow constant check on faster starting and operating speeds, close control of tentering performance.

Then look at the efficient Butterworth Recuperator where caustic is thoroughly removed before delivery to the washers.

If your mercerizing department is not operating smoothly, if damage is high, production is low, machine maintenance excessive, bring your problem to Butterworth. Perhaps a single new machine synchronized to operate efficiently with your present equipment will increase your production quality, protect your profit margin.

Butterworth

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graph of the Ror process pilot machine. Natural tire cord enters a water-borne emulsion of synthetic resins, passing through a battery of pushing rolls or aprons. Upon exit from the battery it has gained eight to $11\frac{1}{2}$ per cent in gauge and length. From this point it is held at tension at the front and back of the heat chamber solely to prevent hot air drying shrinkage.

There is at no time in the entire process any stretching. It is the inventor's contention that stretching distorts and weakens fibers and that such fibers cannot be run commercially without marked end breakage. Further, when stretched fibers are impregnated and dried, such fibers are "set-up" at their weakest distorted point.

The Ror process never stretches, to the contrary it "sets" the fibers at their strongest point for future durability and fatigue resistance. No end breakage ever occurs.

The example given is that of cotton tire cord. The usual procedure is to select strict middling $1\frac{1}{16}$-inch cotton, prepare it as yarn, improve its qualities by the so-called "H-R" treatment," weave it into a loose fabric, dip it in solution of latex, formaldehyde, or Resororin resin, plus additives and calender it.

The Ror process cuts through these steps in the following manner. Using a $1\frac{5}{16}$-inch cotton, it eliminates the H-R process, replaces the weaving by a mat, stronger in every way, replaces the usual dip and sets it into the calendar machine, at least 22 per cent stronger, more durable and fatigue-resistant and having its stretch (controlled at full strength) at least 60 per cent less. Manufacturers of tire cord have the best idea of what this means to them when Ror processing today costs less than $2\frac{1}{2}$ cents a pound.

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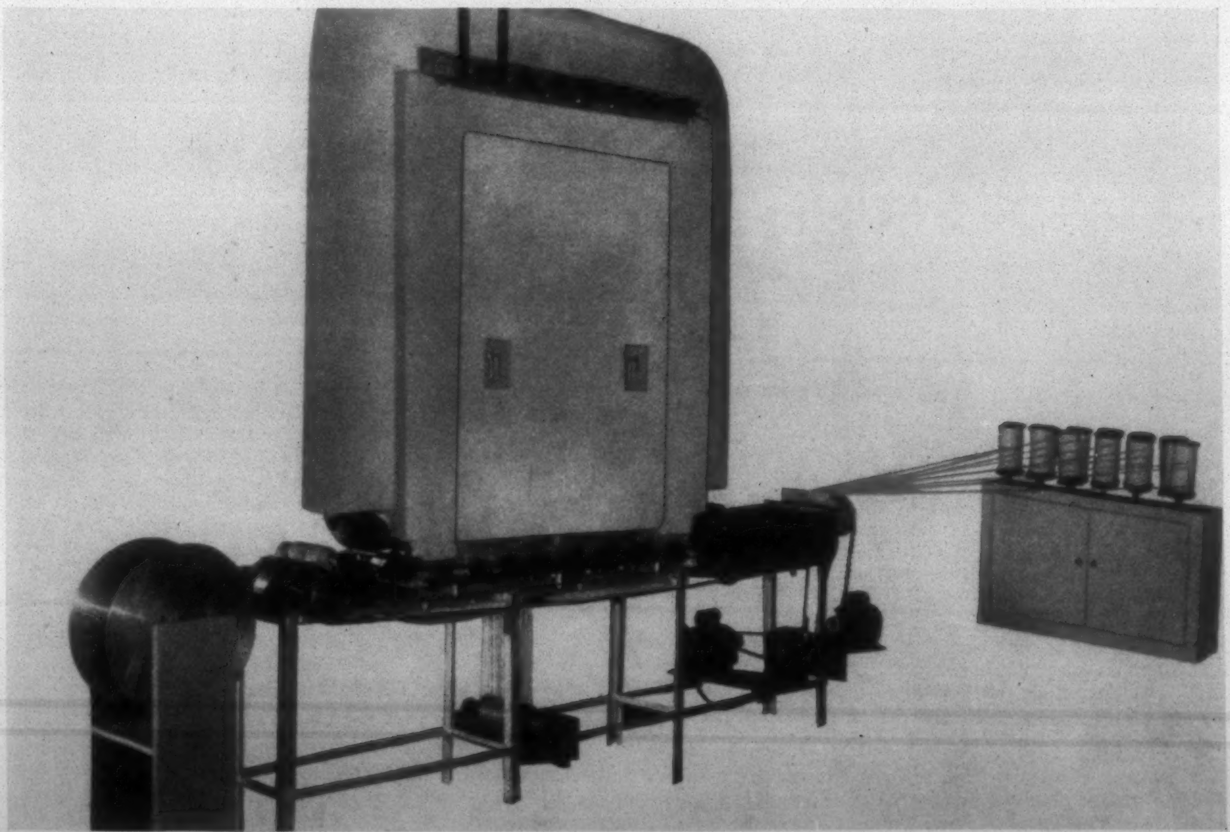
PUBLIC ADDRESS SYSTEM CONTROL ROOM
PUBLIC ADDRESS SYSTEM
Gluecky

"And now we bring you another delightful 15 minutes with your boss and mine, the old maestro, J. B. Dithers himself . . ."

As an example of what can be done with textile spinning and twisting tapes—Ror processed as tape—the break can be raised from 180 pounds in tape five-eighths of an inch wide to 270 pounds, the stretch decreases from eight to $1\frac{1}{2}$ per cent and the impregnants always continue to grip the whorl of the spindle and prevent slippage.

Any yarn or weave can be Ror processed. There are cases where it is preferable to process the weaved product when the yarn itself breaks (single end) under one pound.



The Ror process machine.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

ROCKINGHAM, N. C.—M. Lowenstein & Sons, Inc., New York, since acquiring Plants 1 and 3 of the former Entwistle Mfg. Co., has accomplished extensive rehabilitation on the villages and mills. More than $2,000,000 was spent during 1946 and 1947 replacing machinery and rearranging the machinery layout in Plant No. 1. About $250,000 was expended in repairing the village streets, houses and building 32 new houses. An additional $500,000 was set aside to replace 400 old looms with the latest type and to replace old type drawing machinery. A recreational hall for employees of the plants has been constructed, also.

TALLAPOOSA, GA.—The American Thread Co. is planning to transfer 25,000 spindles and accompanying equipment from its plant in Fall River, Mass., to its Tallapoosa unit. The transfer will leave 78,000 spindles in the Fall River plant, and will increase the total at the Georgia plant to 42,500.

LEXINGTON, N. C.—Contracts have been awarded for construction of a 30 by 75-foot two-story extension to the picker building at Barbet Mills and for a new reinforced concrete dye house 75 by 200 feet, designed for a second floor. The present dye house will be converted to the use of packaged yarn dyeing. The mill improvements are under the supervision of Lockwood Greene Engineers, Inc.

DALLAS, TEX.—The R. D. Hughes Industries, Inc., of Dallas has purchased West Mills, Inc., West, Tex., from Horvath Mills of New York for approximately $350,000. Chairman of the board is W. L. Moody, III, of Galveston, Tex.; president is R. D. Hughes, Dallas, and secretary is A. W. Phillips, Jr., Dallas. J. P. Moses, who was manager of West Mills, Inc., will be general manager in charge of operations of the plant which in the future will be known as West Cotton Mills.

CATEECHEE, S. C.—Norris Mfg. Co. has awarded a contract for a 200-ton refrigeration and air conditioning system for its spinning room to Air Engineering Co. of Charlotte, N. C. The estimated cost is $150,000 and J. E. Sirrine Co. are engineers for the project.

NEW YORK, N. Y.—J. E. Bassill, president of North American Rayon Corp. and American Bemberg Corp. announced May 6 that the boards of directors of the two firms and the Office of Alien Property have retained the engineering firm of Sanderson & Porter, New York, to conduct an engineering survey which is the necessary preliminary for a prospectus in connection with the sale of the stock of the companies held by the Attorney General. At the annual organization meetings of the two firms' boards of directors May 12 all officers of the two corporations were re-elected.

ANDERSON, S. C.—Deering, Milliken & Co. has revealed plans for construction of a large rayon finishing plant in this vicinity. The firm currently has under construction a large plant between Anderson and Pendleton, the fifth plant to be constructed by the company in five years.

DANVILLE, VA.—Dan River Mills recently launched a new public relations program aimed at acquainting citizens of Danville and vicinity with what is being accomplished at the plant. Various civic organizations will be entertained at dinners at which time key administrative officials will give brief summations of what the mills are doing. The firm is now employing 12,000 people, the largest payroll in its history.

AUGUSTA, GA.—It is reported that a plant to weave spun glass into cloth for insulating material is to be established here by the Augusta weaving division of Aiken Mills, Inc. The old Singleton Silk Mill building has been leased for five years and 50 looms are to be installed and 100 employees hired for the test to determine the feasibility of the plan.

TROY, N. C.—Smitherman Cotton Mills recently completed installation of a $20,000 humidifying system. Other improvements recently accomplished include installation of fluorescent lights and the installation of new drawing frames. A new machine shop with latest machinery and a modern supply room is housed in the basement that was excavated for that purpose. Ample room is provided for storage. Two 150 h.p. boilers are to be installed in the near future.

GASTONIA, N. C.—Full-scale three-shift operations have just begun in the newly-built plant of Associated Spinners, Inc., and the use of a revolutionary spinning process is expected to produce fine worsted yarn at prices five to 20 per cent less than yarn made on conventional machinery. Milton E. Tager of New York, president, describes the new process as "the only major advance in manufacturing worsted yarn in several decades."

GASTONIA, N. C. — Installation of new machinery and construction of a refreshment stand for employees is underway at the Ridge Plant of Textiles, Inc. The refreshment room, which will have walls of glass brick, will be 20 by 22 feet. Installation has already started on new long-draft carding and spinning machinery at the plant. The building program at the Ridge unit is part of an over-all modernization program of the firm, which plans to improve all of its plants.

NEW YORK, N. Y. — Bigelow-Sanford Carpet Co., Inc., reports for the first quarter ended April 3, 1948, net income, after federal income taxes, of $902,406. These earnings, after preferred dividends, equal $1.39 per share on the 618,218 shares of common stock outstanding on the new basis, which reflects the recent doubling of the number of common shares. Earnings for the corresponding period of 1947 were $505,610, equivalent to 75 cents per share on the new basis. Sales for the first quarter increased to $20,702,854 from $19,133,619 for the fourth of 1947 and compare with sales of $13,188,734 for the first quarter of 1947. This is the highest sales volume for any quarter in the company's history. At a meeting of the board of directors May 5 the regular quarterly preferred dividend of $1.50 per share and a regular quarterly dividend of 50 cents per share on common stock, equivalent to $1 per share on the old basis, were declared payable June 1, 1948, to stockholders of record May 17, 1948.

OPELIKA, ALA.—Opelika Textile Mills, Inc., has under construction six units of 36 apartments of frame with asbestos siding. Each apartment will be five rooms with all modern conveniences. A playground for children will be located within the immediate vicinity of the apartments.

SILURIA, ALA.—Buck Creek Cotton Mills has recently installed 10,000 new spindles and 500 looms. All cloth room, picker and opening room machinery has been improved and fluorescent lights have been installed throughout the plant.

COLUMBIANA, ALA. — Fred W. Phillips and associates have begun construction of a new textile plant here. The plant will utilize 9,792 spindles and 280 looms to produce soft-filled sheetings. It is to be a division of Valley Mills which is now in operation at Siluria, Ala. The new firm is capitalized at $450,000. Officers are Fred F. Phillips, president and purchasing agent; H. M. Johnson, executive vice-president; A. R. Thornton, vice-president; and T. E. Jones, secretary.

PELZER, S. C.—Pelzer Mills, a subsidiary of the Kendall Co., is featured in the April issue of *Parks Parables*, a monthly publication of the Parks-Cramer Co. The entire 16-page issue is devoted to the two Pelzer plants and contains a number of illustrations.

PROVIDENCE, R. I.—Textron Incorporated and subsidiary companies report consolidated net earnings of $1,962,859 for the quarter ended March 27, 1948, after minority interests and appropriation of $1,000,000 for contingency reserves, equal after allowance for preferred dividends to $1.67 per share on the 1,132,631 shares of common stock outstanding at the end of the quarter. At March 27, 1948, the reserve for contingencies totaled $4,000,000. Consolidated net sales for the first quarter of 1948 were $32,809,944, excluding inter-company and inter-divisional sales, compared with $32,288,257 in the first quarter of 1947. Directors of the firm on May 5 declared a quarterly dividend of 25 cents a share and an extra dividend of 25 cents a share on the common stock of the corporation, payable on July 15, 1948, to stockholders of record as of the close of business on June 15, 1948.

NEW YORK, N. Y.—Estimated consolidated net earnings of United Merchants and Manufacturers, Inc., for the nine months ended March 31, 1948, were $18,760,000, it was reported at a reecnt executive meeting. After provision for preferred dividends,

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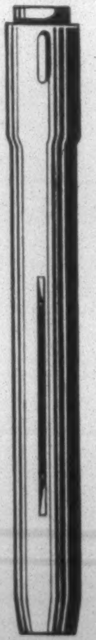

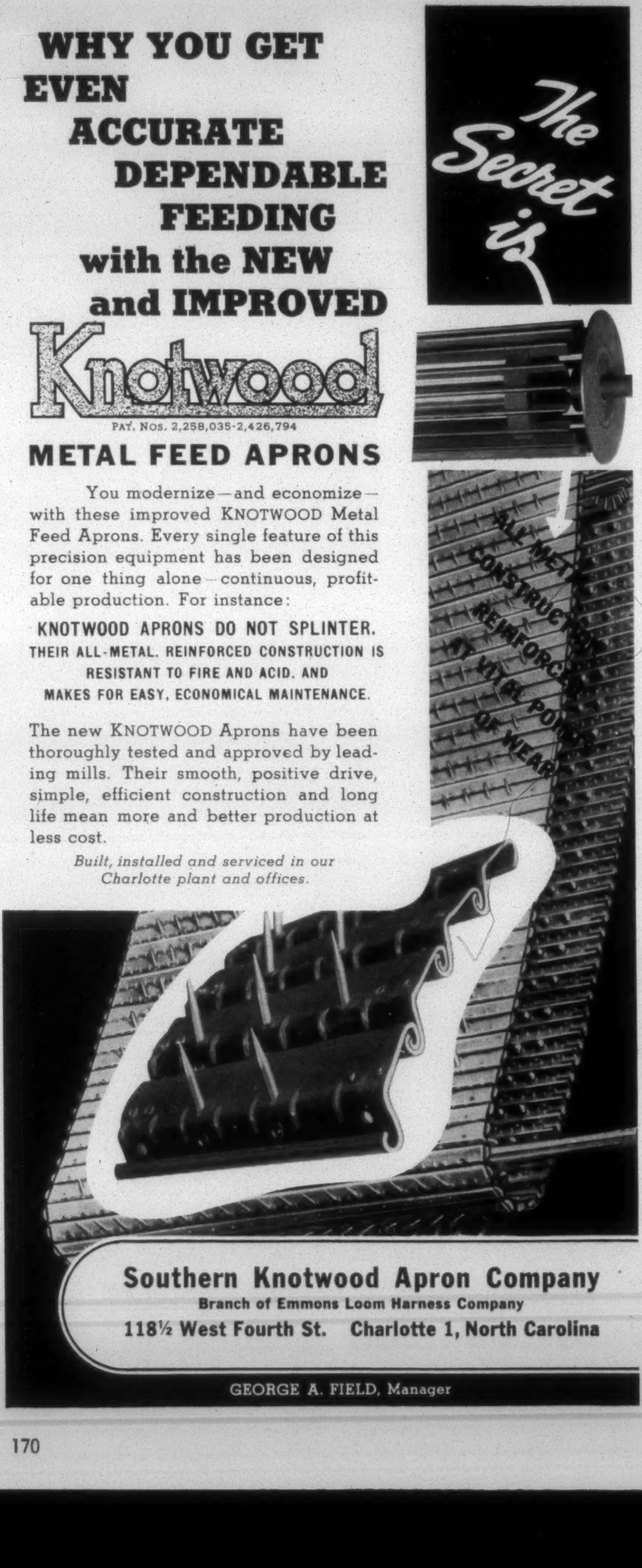

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GEORGE A. FIELD, Manager

these earnings were equivalent to $4.80 per share on 3,885,855 shares of outstanding common stock. For the nine months ended March 31, 1947, the company reported consolidated net earnings of $16,814,000, equal after preferred dividends to $4.27 per share on 3,894,709 shares of common stock then outstanding. Total merchandise sales (including inter-company transactions) amounted to $193,606,000 for the nine months ended March 31, 1948, compared with $174,410,000 for the nine months ended March 31, 1947. These figures do not include business done by United Factors Corp. whose volume rose 31 per cent over the 1947 period.

NEW YORK, N. Y.—Reeves Bros., Inc., and subsidiaries, earned a consolidated net profit of $4,197,452, equal to $3.69 per share on the outstanding common stock, for the nine-month period ended March 31, 1948. This compares with consolidated net profit of $3,054,498, equal to $2.69 per share, for the corresponding period ended March 31, 1947. Consolidated net sales for the nine months totaled $51,831,154 as compared with $37,232,644 for the nine months ended March 31, 1947. Consolidated profit before provision for federal and state income taxes, for the nine months ended March 31, 1948, amounted to $6,843,678. For the three months ended March 31, 1948, consolidated net profit amounted to $1,927,455, equal to $1.69 per share, as against $1,508,367, equal to $1.33 per share, for the Dec. 31, 1947, quarter and $890,185, or 78 cents per share, for the March 31, 1947, quarter.

GASTONIA, N. C.—Textiles, Inc., has declared a special dividend of 50 cents a share on the $1-par common stock payable May 15 to stock of record May 1. This stock is on a $2 annual regular dividend basis.

WILMINGTON, DEL. — American Viscose Corp. reports for the quarter ended March 31 net income of $7,057,446 after all charges and taxes, equal after preferred dividend requirements, to $3.30 a common share, against $4,030,895, or $1.82 a share, for the same quarter in 1947. Dr. Frank H. Reichel, chairman and president, announced that the new acetate rayon yarn facilities of the firm at Meadville, Pa., are expected to be in full operation during the last few months of 1948.

MCKINNEY, TEX.—The McKinney plant of Texas Textile Mills was almost completely destroyed May 3 when a tornado swept through the city. Bryan Miller, vice-president, estimated it probably would take a year to rebuild the plant, and that the firm planned to start the work as soon as possible.

GREENSBORO, N. C.—A regular quarterly dividend of 37½ cents per share on the common stock, payable June 1, 1948, to stockholders of record on May 5, 1948, has been declared by directors of Burlington Mills Corp. Quarterly dividends of $1 per share on the four per cent preferred stock, 87½ cents per share on the 3½ per cent preferred stock, and 87½ cents per share on the 3½ per cent second preferred stock were also declared payable on June 1 to stockholders of record at the close of business on May 5, 1948.

Aberdeen, N. C.—The Aberdeen plant of Colonial Mills is nearing completion and is expected to be put into operation about the first of August. When completed and operating the plant will employ about 500 persons.

Chattanooga, Tenn. — Exterior construction work is about 95 per cent complete and approximately 70 per cent of the equipment has been installed in the $20,000,000 E. I. du Pont de Nemours & Co., Inc., nylon yarn plant here. The plant is scheduled to start production in early Summer.

Mooresville, N. C.—Mooresville Mills has announced plans to establish a $500,000 recreation program for its employees. The project, to be known as the Mooresville Foundation, will include a swimming pool, gymnasium, lounge building and a large auditorium. Fred Holt, former high school principal and coach in Mooresville, has been named director of the recreation program.

Macon, Ga.—Bibb Mfg. Co. announced April 29 a curtailment of production in its nine cotton textile mills. The company stated the cut in production was due to a hold-up in shipping instructions in certain lines of goods.

Shelby, N. C.—A contract has been awarded for construction of a $20,000 addition to Ora Mill Co. here. The plant produces specialties, utilizing 7,116 spindles and 224 looms.

New York, N. Y.—Collins & Aikman Corp. and subsidiary (excluding Canadian subsidiary) reports a net profit of $338,800 after federal and state income taxes for the fiscal year ended Feb. 28, 1948. This is equal to 60 cents per share on the common stock and compares with a net of $3,628,935 for the fiscal year ended March 1, 1947, equivalent to $6.36 per share on the common stock. Feb. 28, 1948, the company's surplus aggregated $13,989,856 as compared with $14,265,100 at March 1, 1947.

Spindale, N. C.—Construction is underway on a three-story addition to Stonecutter Mills Corp. to be used for manufacturing and office space. The building is expected to be completed by the first of the year and will add about 100,000 square feet of floor space to the plant.

Winchester, Va. — Business of Winchester Woolen Mill Co., one of Virginia's oldest textile establishments, is in the process of voluntary liquidation following a vote of stockholders to suspend operations. A backlog of orders for student sportswear and men's suitings will be filled, it was stated, but no new orders are being taken.

Greenville, S. C.—The Brandon Corp. has acquired a tract of land on Birnie Street here but corporation officials have announced no plans for expansion or new construction on the property.

Anderson, S. C.—The board of directors of Ottaray Textiles, Inc., states there will be no change in ownership or management of the firm occasioned by the death of President H. J. Haynesworth, Jr. The new Haynesworth Mill will be completed and put into operation without ownership change, it was announced. Robert S. Small of Greenville, vice-president, has assumed direction of the firms pending a directors' meeting to elect new officers.

Sylacauga, Ala.—Net income of Avondale Mills for the eight months ended Dec. 31, 1947, amounted to $2,072,513, before dividends. Total dividends amounted to $445,500; $67,500 on the preferred stock and $378,000 on the common. Sales and other income for the eight-month period reached $42,735,777.

Meridian, Miss. — The Meridian City Council has taken action toward acquiring a 6,000-spindle cotton mill, employing 400 workers with a weekly payroll of $10,000. The city is applying to the Mississippi agricultural and industrial board for a "certificate of convenience and necessity authorizing the city of Meridian to acquire land and erect a building suitable for establishing a cotton mill in the city." Meridian would provide the land and building for a New York cotton mill firm, being repaid through rent collected from the company.

Childersburg, Ala.—Officials of Beaunit Mills, Inc., have completed negotiations for a ten-year $7,500,000 loan to finance the new 10,000,000-pound capacity viscose filament rayon yarn plant under construction here. It is reported that the entire output of the Childersburg plant will be consumed by Beaunit's weaving and knitting mills.

Dillon, S. C.—Combers and new long-draft roving machinery is to be installed soon at Carolina Mills, Inc. The installation will enable the plant, now producing carded yarns, to spin up to 55s combed, it is reported.

Kings Mountain, N. C. — Bids have been received for construction of a two-story addition, 78 by 119 feet, at Park Yarn Mills Co. J. E. Sirrine Co., Greenville, S. C., are engineers for the project.

Hartwell, Ga. — Textron Southern, Inc., plans to construct a new 240 box-loom rayon throwing and weaving plant at Hartwell for the production of fine rayon fabrics, Royal Little, president of Textron, Inc., announced. The new plant will be a modern one-story windowless, air-conditioned building containing over 100,000 square feet of floor space, and, with its equipment, will cost in excess of $2,000,000. The plant will employ about 300 people with an estimated annual payroll of $500,000.

Altavista, Va.—Burlington Mills Corp. is negotiating for the purchase of a 600-acre tract of land just south of Altavista. J. C. Cowan, Jr., president, stated Burlington has no plans for an immediate building program if the property is purchased. Burlington operates the Altavista Mills at Altavista.

Baltimore, Md.—At a special meeting to be held June 15, stockholders of Mount Vernon-Woodberry Mills will vote on a proposed four-for-one stock split-up. They

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Genuine Third Vein Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railroad.

LYNCO

High fusion coking coal for by-product, industrial stoker and pulverizer use from Wyoming Co., W. Va., on the Vgn. Ry.

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will consider an amendment to the company's certificate of incorporation permitting a reduction of the par value of the common stock from $20 to $5 per share.

COLUMBIA, S. C.—The first automatic picker lap handling installation in the textile industry is now in full operation at Columbia Mills Co. It was developed by P. O. M. Co. and Werner Textile Consultants, Inc. The outstanding feature of this system is that picker laps are transported fully automatically between the picker and card rooms. In addition, a number of features are incorporated which are said to improve quality, reduce waste, facilitate production control and free aisles and passages which are usually clogged up with lap trucks. Another advantage concerns the reduction of the work load of the picker tender and the fact that the job of lap hauling is eliminated. The weight of the lap have been considerably increased since practically no manual handling and lifting of the lap no longer is required.

GREENSBORO, N. C.—Burlington Mills Corp. reports consolidated net sales for the six months ended March 27, 1948, of $134,700,206 and net profit of $13,105,443. The profits are after deducting state, federal and foreign income taxes and after increasing inventory reserve by $1,000,000. After providing for dividends on preferred stock, these earnings are equivalent to $3.58 on each of the 3,502,576 common shares outstanding. The six months' sales volume, which is the largest in the company's history, represents a 22 per cent increase over the first six months of 1947, when sales were $110,306,278. Profits after reserves for taxes for the first six months of the 1947 fiscal year amounted to $12,613,476, which after providing for dividends on preferred stock were equivalent to $3.50 per common share then outstanding.

MORRILTON, ARK. — Morrilton Cotton Mills has been purchased by Arkansas Cotton Mills, Inc., a newly organized firm capitalized at $1,000,000, and facilities of the mill will be expanded and converted immediately. The firm will change from manufacture of numbered duck fabric to a corduroy weaving mill. The buildings will be remodeled and enlarged and new machinery will be installed as rapidly as possible, with the new firm taking possession in July. Orders of the Morrilton mill will be filled before the new owners take charge. Three shifts will be operated daily after the changeover. Employees were notified by C. V. Hoke, former owner, that the mill has changed hands. George Hoke, superintendent, will be retained in an advisory capacity with the new company. Incorporators of the new firm are Nightingale Richmond of Staunton, Va., Charles H. Merriman, Jr., of Charlottesville, Va., and Samuel Y. Austin, Jr., of Waynesboro, Va.

CLEVELAND, OHIO—Directors of Industrial Rayon Corp. at a meeting May 13 declared a dividend of 75 cents per share on common stock of the corporation, payable June 11, 1948, to shareholders of record May 24, 1948. All officers of the corporation were re-elected.

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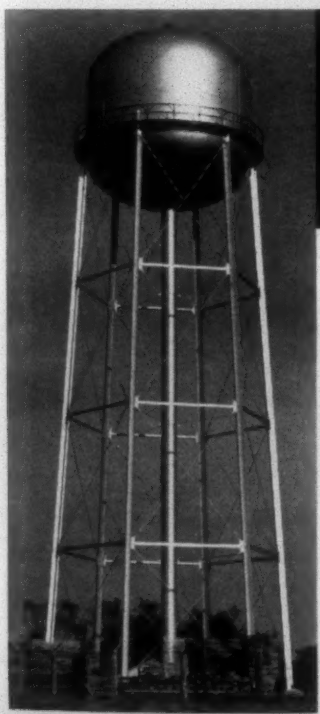

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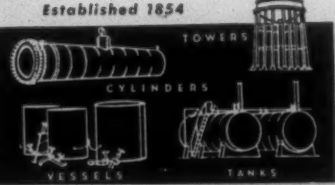

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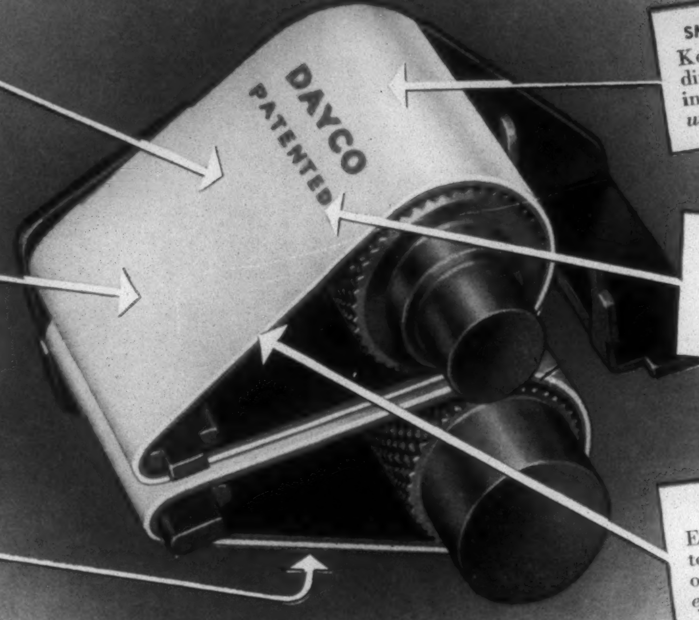

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Dayco Aprons eliminate marking of the yarn . . . *it stays clean.*

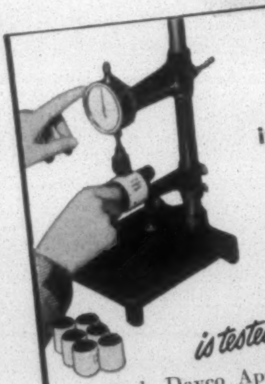
SMOOTH, SATIN FINISH
Keeps surface free of dirt, eliminates gathering of lint . . . *insuring uniform drafting.*

IMPROVED DRAFTING SURFACE
Specially engineered surface means less cleaning, less clearer waste . . . *greater uniformity of yarn.*

CROSSWISE RIGIDITY
Dayco Aprons don't compress or wrinkle on the inside; or distort on the outside.

NEUTRAL AXIS CORD
Each Dayco Apron contains specially processed Raytex Fortified Cord . . . *providing greater strength.*

UNIFORM THICKNESS
Each Dayco is finished to .002 of an inch plus or minus . . . *insuring more efficient drafting of yarn.*



and, in addition, every DAYCO APRON

is tested for thickness!

Each Dayco Apron is tested to meet your specifications for single or double apron systems. Inside diameters are held to $\frac{1}{64}$″ and thickness to .050, + or − .002 . . . another reason Daycos draft up to 10 percent more uniform yarn.

The above are but *a few of the many* reasons leading mill men insist on Dayco Long Draft Aprons for every frame in their spinning rooms.

Important, too, is their nonstretch feature that keeps them on the frames when you start up. Nondirectional Daycos can be put on either way. They are manufactured without laps or splices and are finished smooth inside without rib.

Dayco Long Draft Aprons are designed to handle natural or synthetic fibers better, more economically. If you aren't using Daycos on your frames, it will pay you to write for additional information, or have one of our textile machine accessory engineers call on you. He can show you additional ways to economical production of better yarn. Write The Dayton Rubber Co., Dayton, Ohio, *or Textile Division—Main Sales Office, Woodside Building, Greenville, S. C.*

Dayton Rubber

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

William D. Carter has been appointed superintendent of Seaboard Mills plant of U. S. Rubber Co. textile division at Burlington, N. C. Mr. Carter has 33 years experience in the textile industry, and for 24 years was with Marshall Field & Co.'s manufacturing division as joint manager of its textile mills.

Thomas F. Parks, formerly with Collins & Aikman Corp., Bristol, R. I., has become associated with William Whitman Co., Inc., as assistant wool buyer and will make his headquarters at the Whitman company's Boston, Mass., office at 78 Chauncy Street.

Buckley Whitlatch, native of Albemarle County, N. C., has joined the staff of the Institute of Textile Technology, Charlottesville, Va., as a member of the division of mechanical engineering. Mr. Whitlatch recently returned to this country from Oxford University, England, where he was a Rhodes Scholar. James H. Bellingham also has joined the I. T. T. mechanical engineering division. Mr. Bellingham is a native of Rochester, N. Y., and is a 1947 graduate of the University of Rochester.

Walter Dillard has resigned his position with California Cotton Mills, Uniontown, Ala., to accept the presidency of a newly-formed mill, The Evangeline Textile Mills, with headquarters at Ville Platt, La.

A. W. Ricks, former technician at Fieldcrest Mills, Spray, N. C., is now assistant superintendent at California Cotton Mills, Uniontown, Ala.

Bernard Crowe, formerly overseer of designing at Elm City Mills, LaGrange, Ga., has resigned to accept a position in Hartwell, Ga. Mr. Crowe was succeeded by Robert Whitley, formerly in the plant's department of standards.

Billie Steve Harris of Forest City, N. C., has been selected to receive the Abraham and Charles Erlanger Textile Scholarship and will begin his academic studies in the North Carolina State College School of Textiles, Raleigh, in September. The scholarship is valued at $1,600 and covers four years of college training.

William Fraser, treasurer of J. P. Stevens & Co., will head the solicitation of Manhattan's textile industry in the Greater New York Fund's 1948 campaign. A committee headed by Jackson E. Spears, vice-president of National Mallinson Fabrics Corp., will solicit silks, rayons and yarn concerns for the fund. Others on this committee are Sylvan Gotshal, partner, Weil Gotshal & Menges; August Rosendale, treasurer, B. W. Bates Piece Dye Works, Inc.; John Fox, president, Fox Wells & Co.; William L. O'Donovan, manager, Filament Yarn Sales Division, Celanese Corp. of America, and James Campion, also of Celanese Corp.

Chal L. White of Charlotte, N. C., has been appointed direct factory representative in North Carolina and Virginia for the Marquette Metal Products Co., Cleveland, Ohio. John J. Hallissy, Lowell, Mass., is the company's new representative in New England.

Dr. Edwin A. Robinson, formerly in charge of the textile rayon section of Nopco Chemical Co. sales department, has been appointed an assistant vice-president of the firm and will be in charge of all laboratories, sales development and market development departments of the industrial division.

Sidney Cox, formerly foreman of examining at Fieldcrest Mills, Inc., woolen mill at Spray, N. C., has joined M. T. Stevens & Sons at Rockingham, N. C., as foreman of burling and mending.

William R. Muller, who is associated with the Jacobs interests in Danielson, Conn., and Charlotte, N. C., has been named vice-president and sales manager of Jacobs Rubber Products, Inc. The assignment was made for the purpose of expanding the company's production of natural and synthetic rubber products for general industrial and textile applications.

Charles S. Underwood, formerly connected with Brookside Mills, Inc., is joining the William Whitman Co., Inc., June 1 as vice-president in charge of the cotton and rayon fabrics division. . . . Bert E. Schroeder, who has been associated with the firm for over 20 years, will become manager of the gray goods department of the cotton and rayon fabrics division and will concentrate on expanding this phase of the company's business.

H. A. (Hank) Mitchell, sales representative for A. E. Staley Mfg. Co., has been elected president of the Spartanburg, S. C., Rotary Club.

Benjamin Cone of Greensboro, N. C., Robert J. Gurney of Gastonia, N. C., William W. Goodman of Memphis, Tenn., Bernard Werthan of Nashville, Tenn., and Israel Rogosin of Weehawken, N. J., all nationally known textile executives, have been named on a 19-man textile committee to mobilize support for the $250,000,000 United Jewish Appeal for refugees, overseas needs and Palestine. Joseph Schulman, Schulman-Abrash, is national chairman of the U. J. A. textiles division.

J. W. Hansen, secretary-treasurer of Iselin-Jefferson Co., Inc., was elected chairman of the financial group of the Association of Cotton Textile Merchants of New York, at the recent annual meeting and dinner of the group. Mr. Hansen succeeds Harold R. Elliot of Wellington Sears Co., who has held the post of chairman since the organization meeting in 1934. Mr. Hansen also is a charter member of the group originally representing the old firm of Bliss, Fabyan & Co., Inc.

M. Gilbert Hopkins has been appointed as a sales engineer for the Rodney Hunt Machine Co., Orange, Mass., makers of textile wet finishing machinery. Mr. Hopkins, associated with the firm since 1937, has both assisted in co-ordinating the design and development and been in charge of mill tests for new equipment.

G. M. Olmstead, formerly with the sales force of Crompton & Knowles Loom Works at Worcester, Mass., has been transferred to the firm's Southern sales headquarters at Charlotte, N. C. He replaces Thomas P. Graham, who now is associated with Charlotte Supply Co.

Louis M. Saxon is now manager of Aponaug Mfg. Co., West Point, Miss. He succeeds Edgar L. Israel, resigned. Prior to joining Aponaug Mr. Saxon was second shift superintendent for Southern Spinning Co. at Nashville, Tenn.

Lawrence A. Appley, vice-president of Montgomery Ward & Co., has been appointed president of the American Management Association and Alvin E. Dodd, A. M. A. president for the past 12 years, has been named to the newly created post of honorary president. Mr. Appley will leave Montgomery Ward July 1 to assume his new duties.

George G. Sommaripa has joined the staff of the American Standards Association as head of the national standardization work on consumer goods. Mr. Sommaripa has had considerable experience in the textile industry as well as in general administration. He was vice-president and director of planning and research for the Silk Association of America from 1926 to 1933, served as assistant deputy administrator for the textile and leather industries for the N. R. A. in 1935, and carried out a study of the technological progress in the silk, rayon, cotton and wool industries for the U. S. Department of Labor in 1936.

John I. Smith and David R. LaFar, textile executives of Greenville, S. C., and Gastonia, N. C., respectively, have been nominated for the presidency of the Davidson College Alumni Association.

Bernard M. Cone, prominent textile executive of Greensboro, N. C., recently was honored by students of the eighth grade class at Proximity School who voted him as the outstanding citizen of Greensboro and Guilford County because of his contribution to the cultural and industrial life of the city.

Stanley H. Rose has been appointed sales promotion manager of the Celanese Corp. of America's woven fabrics division. He was advertising manager of Aralac, Inc., from 1942 until that company was sold recently.

C. McD. Carr, vice-president of American Enka Corp., has been elected president of the Southern Society in New York City.

Harold S. Tate, chief of the Textile Division of the Economic and Scientific Section of S. C. A. P. in Tokyo, Japan, has resigned and will enter the service of the Chinese Government as a technical textile advisor. Mr. Tate for 16 years was connected with Clemson College, Clemson, S. C.

Howard J. Smith has been appointed assistant manager of the resale chemicals section of Grasselli Chemicals Department of E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. . . . Henry F. Koll was named manager of the Grasselli department district office at Charlotte, N. C.

Dr. D. P. Morgan joined The Mathieson Alkali Works May 15 as administrator of research and development. He formerly was connected with W. R. Grace & Co., New York, in charge of chemical market research and development.

Leonard Shapiro, formerly research director for Alrose Chemical Co., has become associated with Synthron, Inc., Ashton, R. I., as research director.

Albert H. Gordon, a partner in Kidder, Peabody & Co., has been elected a director of Burlington Mills Corp.

A. Dewey Carter, president of Carter Mills, Lincolnton, N. C., a division of A. B. Carter, Inc., Gastonia, N. C., was married April 24 to Jean Murry at Greenville, S. C.

T. L. Ellis, formerly overseer of spinning at Calvine Mills, Charlotte, N. C., is now assistant overseer of spinning with Gaffney (S. C.) Mfg. Co.

William W. Carter, Greenville, S. C., has retired as president of Fiske-Carter Construction Co. after 40 years service with the firm. In the interest of efficiency the administrative offices of the firm are to be moved from Worcester, Mass., to Greenville and the name changed to Fiske-Carter Construction Co. of South Carolina. New officers of the corporation are W. L. G. MacKenzie, Spartanburg, S. C., president; W. T. Adams, Greenville, secretary-treasurer; S. L. Rhodes, and M. B. Phipps, Worcester, and A. M. Lander, Jr., Spartanburg, all named vice-presidents and assistant secretary.

A. D. Asbury, textile engineer and partner in J. E. Sirrine & Co., Greenville, S. C., has been elected president of the Greenville Rotary Club. Mr. Asbury succeeds Alan B. Sibley, vice-president and treasurer of Judson Mills, Greenville, and treasurer of Laurens (S. C.) Cotton Mills. Mr. Sibley automatically becomes vice-president of the Rotary Club of Greenville.

J. M. Spearman, superintendent of the Arial (S. C.) plant of Alice Mfg. Co., has retired after 50 years in the textile business.

S. H. Harris has been appointed agent and superintendent of the Standard-Coosa-Thatcher Co. plant at Piedmont, Ala. Mr. Harris succeeds George P. Haslam, Sr., retired. . . . Another plant promotion was that of C. B. Bennett as manager of the roving yarns division and assistant superintendent.

William M. Pittendreigh, formerly assistant superintendent of the gray mill of Riegel Textile Corp. at Ware Shoals, S. C., has been appointed superintendent.

P. S. Bailey, formerly vice-president, has been elected president and treasurer of Lydia Cotton Mills and Clinton Cotton Mills, Clinton, S. C., succeeding the late W. J. Bailey. Other officers of the two mills are: Clinton—George H. Cornelson, vice-president; W. C. Neely, secretary; and Robert M. Vance, assistant treasurer; Lydia—Mr. Cornelson, vice-president; J. D. Hairston, secretary; Mr. Neely, assistant secretary; and Mr. Vance, assistant treasurer.

Morris S. Rostenthal, president of Stein, Hall & Co., recently was re-elected president of the National Council of American Importers. Among other officers known to the textile industry are: Robert W. Milbank, Jr., Milbank, Leaman & Co., woolens, a director; Jerome Kohlberg, Kane Import Corp.; Fred Leighton, Fred Leighton's Mexican Imports; John H. Moore, John Hudson

Shown above are officials of Linwood Cotton Mills, a division of Publix Shirt Corp. at La Fayette, Ga. Front row, left to right: T. M. Fleming, shipping clerk; E. A. Maddox, overseer of weaving; Weymon Harmon, policeman; J. C. Doran, second hand carding; J. F. Plexico, manager and superintendent; and Vernon Poore, second hand spinning. Standing, left to right: O. W. Strickland, second hand weaving; L. P. Lankford, second hand carding; W. S. Strickland, overseer of shop and yard; Albert Bowman, second hand spinning; Luther Bryson, second hand carding; C. L. Busbee, overseer of carding and spinning; Russell Parker, overseer of cloth room; and J. Forrest Jones, office manager. Not present when this picture was taken were J. Russell Fennell, assistant superintendent; Harrison Cordell, second hand weaving; James F. Green, second hand weaving; and Joseph Newton, second hand spinning.

The Linwood plant has been in existence since 1892, when it was organized with funds collected by citizens of La Fayette and Chattanooga, Tenn. It later was sold to Consolidated Textile Corp., then to Exposition Cotton Mills of Atlanta, Ga. In 1941 it was purchased by Public, which uses the broadcloth output for fabrication in 27 shirt fabtories. The plant now is operated on a three-shift basis six days a week.

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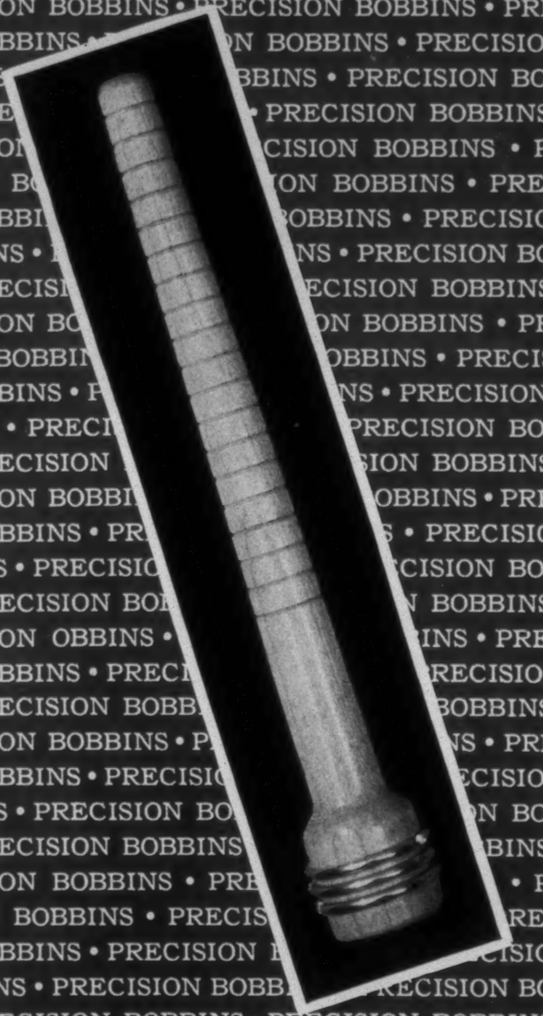

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Moore, Inc., and Roland Gsell, R. Gsell & Co., Inc., vice-presidents; Paul A. Straub, Paul A. Straub & Co., treasurer.

Nathan Sheinman, president of Raycrest Mills, Pawtucket, R. I., has taken over the management and the sole selling agency for Brookside Mills, Inc., Knoxville, Tenn. The New York office of Brookside has been moved from its former location on Church Street to 1071 Avenue of the Americas.

Clyde M. Lassiter, left, has been appointed Southern sales engineer by Bijur Lubricating Corp. of Long Island City, N. Y. Operating out of Charlotte, N. C., Mr. Lassiter will contact textile mills in Alabama, Georgia, North Carolina and South Carolina. He will be available for consultation regarding the application of central lubricating systems to textile machinery. He formerly was associated with the Brown Instrument Division of Minneapolis-Honeywell Regulator Co.

Edward P. Killackey has been appointed an assistant treasurer of Celanese Corp. of America. Mr. Killackey recently was transferred to the New York office of the firm after serving since 1941 at the Cumberland, Md., plant.

John P. Stevens, Jr., president of J. P. Stevens & Co., Inc., has been elected a trustee of Phillips Academy, Andover, Mass.

Robert Small of Ottaray Textiles, Inc., recently was elected a director of South Carolina National Bank, Greenville.

Walter L. McNab has bene appointed sales representative in Tennessee and the northern section of Alabama and Georgia for Amalgamated Chemical Corp. of Philadelphia, Pa. Mr. McNab has been associated with the textile industry in the sale of chemicals and dyestuffs for a number of years. He will make his headquarters at 2657 Magnolia Avenue, Knoxville 15, Tenn.

E. C. Horner has resigned as general overseer of the Oxford, N. C., cotton mill unit of Burlington Mills Corp. to become assistant superintendent of J. M. Odell Mfg. Co. at Bynum, N. C.

Herman F. Stuhr, Jr., has been transferred from the Front Royal, Va., plant of American Viscose Corp. to the company's plant at Nitro, Va., where he is technical assistant to the plant manager.

H. B. Littlejohn, public relations director for the Kendall Co. plant at Camden, S. C., has been elected first vice-president of the Camden Lions Club.

L. V. Andrews, superintendent of Cedartown (Ga.) Yarn Mills, Inc., last month was elected a city commissioner of Cedartown.

Benjamin L. Whittier, fabric development engineer with Mount Vernon-Woodberry Mills, Inc., Baltimore, Md., will join the faculty of the North Carolina State College School of Textiles July 1 as head of the department of fabric development and construction. Mr. Whittier will succeed Prof. T. R. Hart, who has been appointed director of instruction in the School of Textiles, effective Sept. 1.

H. K. Hallett of Charlotte, N. C., has been elected president and a director of Pelzer Mills, a wholly-owned subsidiary of the Kendall Co. Mr. Hallett succeeds Henry P. Kendall, who was elected chairman of the board.

S. Reed Anthony, assistant manager of the staple sales division of American Viscose Corp., is resigning June 1 to join Greenwood Mills, Inc.

Clifford L. Hall has been appointed manager of the cotton yarns branch of Danville Knitting Mills, Bon Air, Ala. Mr. Hall previously was connected with Callaway Mills and Bibb Mfg. Co.

Edward C. Tompkins has retired as vice-president and production manager of P. H. Hanes Knitting Co., Winston-Salem, N. C., giving up these duties on the advice of his physicians. Prior to his retirement Mr. Tompkins was honored by plant employees at a special ceremony and presented many gifts.

Benjamin S. Van Zile, well-known authority on soaps and detergents, has joined the research staff of the United States Testing Co., Hoboken, N. J. Mr. Van Zile for many years was with Colgate-Palmolive-Peet Co., as supervisor of the analytical research division of the development department, specializing in synthetic detergents, soaps and cosmetics. . . . At the annual stockholders meeting of U. S. Testing Co. the following directors were elected: J. P. T. Armstrong, Belding Heminway Corticelli

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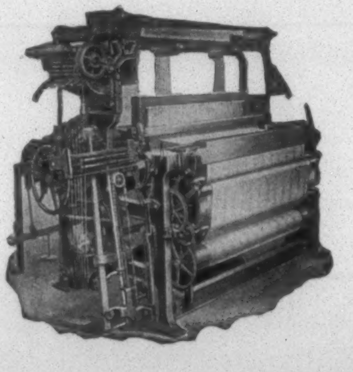

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Harry L. Dalton, left, director of public relations of the American Viscose Corp. and a member of its board of directors, has been appointed director of sales and public relations for the concern. In the sales capacity he succeeds the late William B. Olmsted, Jr. Mr. Dalton joined American Viscose in 1925 as a member of the Charlotte, N. C., sales office. He was made manager of the Charlotte office in 1928, a post he held until October, 1946, when he was elected to the board of directors and assumed the supervision of the Southern sales area. Mr. Dalton will make his headquarters in the company's general offices in Philadelphia, Pa. At a meeting of the firms' board of directors after the annual meeting of stockholders in Marcus Hook, Pa., May 3, Mr. Dalton was elected to the position of vice-president in charge of sales and public relations.

OBITUARY

George D. Fryfogle, 70, superintendent of Brandon Mill, Greenville, S. C., died April 29 following a sudden illness. Surviving are his wife, a son and daughter, one brother and two sisters.

Leo M. Bannon, 64, director and secretary of Mansfield (Mass.) Bleachery, died April 11. Mr. Bannon had been associated with Mansfield Bleachery for the past 35 years and previously was with Union Bleachery at Greenville, S. C. Surviving are his wife, a son and two brothers.

Harry J. Haynesworth, Jr., 48, Greenville, S. C., president and treasurer of Ottaray Textiles, Inc., Anderson, S. C., died suddenly of a heart attack April 21 while on a business trip in New York City. Mr. Haynesworth received his textile training with the Victor-Monaghan and Judson Mills of Greenville and was a former vice-president of Burlington Mills Corp., a position he held until the organization of Ottaray Textiles. Surviving are two sons, a brother and two sisters.

Thomas W. Mullen, 68, of Roanoke Rapids, N. C., and Richmond, Va., former vice-president of Rosemary Mfg. Co. of Roanoke Rapids, died April 26 at a Richmond hospital. Mr. Mullen became associated with Rosemary Mfg. Co. in 1901 and retired last year. Surviving are his wife, a son, two daughters, two step-daughters and two brothers.

Charles P. Curtis, 87, Boston, Mass., former president of Lowell Bleachery, director of Dwight Mfg. Co., Sharp Mfg. Co., New Bedford, Mass., and Boston & Roxbury Mill Corp., died last month. Surviving are his widow, two sons and a daughter.

Russell C. Young, 50, Southern manager for Borne Scrymser Co. of New Jersey with headquarters in Charlotte, N. C., died April 26 in a Charlotte hospital after an illness of several weeks. Survivors include his wife, a daughter, two sisters and a brother.

David B. Kanoy, Sr., 52, founder and president of Kanoy & Sons Machine Co., Charlotte, N. C., died April 29 of a heart attack in Washington, D. C. He leaves his widow and two sons, who will continue to operate the company.

Z. D. Cochrane, superintendent of Roberta Mfg. Co., Concord, N. C., died May 12 after an illness of several weeks. Mr. Cochrane is survived by seven daughters and five sons.

William P. Leister, 71, who retired about six years ago after having served as superintendent of several units of Victor-Monaghan Co., Greenville, S. C., died recently at his home in Gastonia, N. C. Mr. Leister was associated with Victor-Monaghan for 30 years. Surviving are his widow, two sons and two daughters.

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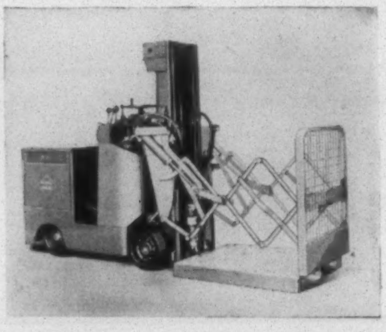
EQUIPMENT — SUPPLIES — LITERATURE

Arnold, Hoffman Acquires Cincinnati Chemical Firm

Arnold, Hoffman & Co., Inc., Providence, R. I., recently announced acquisition of the business of Harkness & Cowing Co., Cincinnati, Ohio, a producer of high-grade stearic acid, red oil and crude glycerine. The new Arnold, Hoffman unit will continue to serve its present accounts and there will be no changes in the personnel of this division, it is reported. Production will be increased to meet all Arnold, Hoffman demands and to continue to satisfy the regular Harkness & Cowing accounts. Acquisition of the Cincinnati firm will enable Arnold, Hoffman to serve the Middle Western states better than has been possible heretofore from Providence, Dighton or Charlotte.

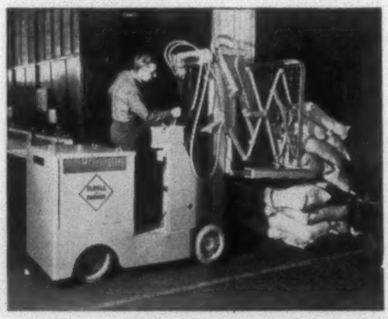
New Pallet Retriever Cuts Shipping Costs

Fork-type power trucks and pallets have proved to be a remarkably effective combination for reducing handling costs, but now the tendency is to avoid use of pallets wherever possible in shipping operations, according to Elwell-Parker Electric Co., Cleveland, Ohio. Several reasons are noted. Cost of manufacturing pallets has increased and higher prices must be paid for them. With keen competition in many lines the extensive use of pallets which are never returned makes a big difference in profit margins if commodities are low priced. The number of companies using fork and other type power trucks in manufacturing and shipping has been increasing at a rapid rate. Still there is constant demand for cutting handling costs.



These companies view the pallet situation as follows: If a consignee has power fork trucks with which to unload palletized goods, thereby benefiting from the use of the pallets and if arrangements can be made respecting return of pallets the cost may be reduced. Shipping on pallets then may be justified. But when the presence or absence of pallets makes no difference to the consignee and no effort is made to save or return them this can be a very expensive item. Users want to hold on to their supply of pallets for handling materials in their own yards and factories.

The cost and loss are especially noted when less-than-carload shipments are constantly made to consignees who have not modernized their handling facilities and who promptly scrap the pallets; from them there is no return even in good will for having shipped products in such a way as to make it easier for them to unload. Truck users have been trying to avoid this expense in several ways: By packaging materials or products in such form that they may be handled on truck forks without pallets. This applies especially to boxes, bags and bales. Also, in some instances by using cheaper substitutes for pallets — "throw-aways" which nevertheless cost money.



Truck builders have approached the problem from a different angle. One of the latest and successful developments is a pallet retriever attached to a standard fork-type truck whereby pallets may be used in the customary method for fast loading of freight cars yet remain at home in owner's possession. With this attachment the truck owner has practically all the advantages of the truck-pallet method in his own plant and also in loading cars, without loss.

The accessory as announced by Elwell-Parker Electric Co. is light, compact and attachable to the forward end of the truck. A load-handling or stabilizing mechanism consists of two hydraulically actuated pantagraph-type rams which terminate in a screen frame that remains in fixed position with respect to the load. Rams are self-adjusting to fit and follow the contour and vertical or lateral motion of the load, while the truck with the pallet backs away and withdraws the pallet from beneath the load. The rams can be operated in corners of box cars since they may be actuated independently or together. No part of the mechanism at any height of lift projects across the entrance to or exit from the driver's station, a new and exclusive safety feature.

As an example of the adaptability, it is a simple matter and time-saving to apply the retriever to unloading goods direct from the fork when pallets are not being used. The device can remain inoperative on the truck and not interfere with the use of the truck itself when handling large bales, boxes and casks on its fork, or when transporting and tiering master-unit loads assembled on returnable or non-returnable pallets.

Retracted, the device occupies little space and adds little to the weight of the truck; extended, it has a powerful smooth-action stroke, controlled entirely by the truck's operator. Prior to the time unit-loads were carried on pallets such loads were supported directly on truck's fork. It was in 1927 that the first suggested "push-off" unloading device was offered by Elwell-Parker. Design of this early mechanism has been followed to some extent in the new pallet retriever, but improved to meet present demands.

Elwell-Parker is represented in the two Carolinas by the Engineering Sales Co. of Charlotte.

New Onyx Data Sheets Describe Two Resins

Onyx Oil & Chemical Co., Jersey City, N. J., recently has issued two Technical Data Sheets, 18-T and 19-T, describing its Xyno Resin S 69 and Xyno Resin 362, respectively. Each data sheet lists the major uses, advantages, application and chemical and physical characteristics of the resin concerned. Xyno Resin S 69 is described as a water-thin dispersion of a thermoplastic synthetic resin of fine particle size, applicable to a wide range of fabrics and providing a unique dry, springy hand. Xyno Resin 362 is said to be a viscous dispersion of a thermoplastic synthetic resin of relatively coarse particle size. According to the data sheet it gives a very stiff hand, and is employed on cotton, rayon, acetate and nylon constructions.

Du Pont Booklet Describes Elvanol Polyvinyl Alcohol

The polyvinyl alcohols, solid alcohols in powder form, are a series of versatile resins of proved usefulness in a great variety of industrial applications. The Du Pont Co. describes the physical and chemical properties, commercial grades, uses and applications of these resins in a new booklet, *Elvanol Polyvinyl Alcohols.*

By varying conditions of manufacture a whole series of polyvinyl alcohols, each with markedly different physical properties, can be made. From the large number of possible compounds Du Pont has selected ten grades for commercial manufacture. The booklet gives a summary of major industrial uses under such general headings as Adhesives and Binders, Textile Sizing, Temporary Protective Coatings, Emulsifying and Thickening Agents.

For textile sizing, high tensile strength combined with flexibility, good abrasion resistance, adhesion and water solubility have resulted in widespread industrial use of Elvanol polyvinyl alcohols as sizes for knitting and weaving yarns of all types. Particularly good results are obtained with rayon and acetate, both filament and pure or blended spun or cut staple yarns. Readily soluble in water, Elvanol is easily removed from the gray goods. The size can be applied by the customary warp slashing, skein, or single thread methods.

Its properties have shown Elvanol, either alone or combined with other semi-permanent finishing compounds, to be of commercial interest in certain types of textile finishing, as well as for use in special textile coating applications, such as in the manufacture of oil and solvent resistant fabrics.

New Ashworth Plant In Greenville To Open Soon

Ashworth Brothers, Inc., Fall River, Mass., is expected to begin operations soon in its new $400,000 plant at Greenville, S. C. The building is 560 feet long by 66 feet wide, and workers will produce card clothing for textile plants. R. C. Ashworth, Jr., president, revealed that full operations will not begin at first due to a shortage of trained workers. It is planned to begin with a small machinery unit manned by trained workers from the firm's Charlotte, N. C., plant, who, in turn, will train others for the new type jobs. The firm operates other plants at Worecster, Mass., Philadelphia, Pa., and Atlanta, Ga.

Brown Instrument Announces $2,500,000 Expansion Plan

A $2,500,000 expansion program, announced by Brown Instrument Co., Philadelphia, will add more than 60 per cent to its present manufacturing space and a proportionate increase in employment, said Henry F. Dever, president. Increased sales, which have climbed steadily from war peaks, and expanded research and engineering activities, made necessary by the growing industrial use of the type of automatic controls produced by the company, were the main considerations behind the move, he stated.

The program includes construction of a four-story addition to the main plant at Wayne Junction. Building was scheduled to begin in May and the first phase of the project is scheduled for completion next March. The foundation and footings of the new wing are designed so that four additional floors may be added at a later date. When completed, the first four-story structure will enable the company to combine some of its outlying leased sites and simultaneously provide needed space and production facilities to keep pace with the present high levels of business, the Brown official explained.

According to architectural plans, the new building will add 95,000 square feet to existing main plant space. The addition will comprise five floors, including a basement of about 19,000 square feet per floor. Because the foundation is designed to support four additional floors, the new wing will eventually make possible an addition of 171,000 square feet to the present building. Still further expansion to the present structure is provided for in a supplementary plan which will more than double present facilities when the need develops, said Mr. Dever.

Brown Instrument is a wholly owned subsidiary of the Minneapolis-Honeywell

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Regulator Co. and operates as the industrial division of the parent firm. The Brown company was established in 1859 by Edward Brown and incorporated in 1910 by his son, Richard P. Brown, who today is serving as chairman of the board. In addition, he is a director and vice-president of Minneapolis-Honeywell. Products of the division are used in manufacturing and processing of textiles, chemicals, and in similar fields where precision control of high volume production is essential.

New York Chemical Firm Changes Corporate Name

In recognition of the expanded scope of the company's activities, stockholders of Westvaco Chlorine Products Corp., New York City, voted at the annual meeting on April 28, 1948, to change the corporate name to Westvaco Chemical Corp.

New Type Warp Size Introduced By Nopco

Announcement of a new type acetate and viscose warp size has been made by Nopco Chemical Co., Harrison, N. J. Known under the trade name Unisize, this new polymer represents the most advanced development in warp sizing, the firm claims. It is a single, one-product size which acts as binder, softener, penetrant, lubricant, humectant and defoamer. One of its most outstanding advantages is that Unisize completely eliminates the need for auxiliary additives to the size.

Physically, Unisize is a free-flowing, non-sticky, granulation which, in appearance, is very much like light brown sugar. It is extremely soluble and dissolves readily in hot water with simple stirring. No. lumps and gelling occur to prevent even distribution of the size on the warp.

Unisize creates a strong bond and forms a flexible and non-tacky film, the firm states. Maximum filament protection is provided. Static is eliminated during slashing and weaving. A minimum of shedding occurs in the loom. Weavers who have tried Unisize report the finest warps they have ever had. On particularly difficult constructions, as high as 98 per cent weaving efficiency has been obtained, company officials state.

Diazo Brilliant Blue Described In Bulletin

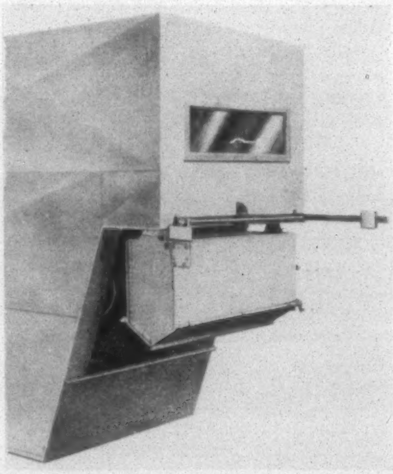
General Dyestuff Corp., 435 Hudson Street, New York 14, N. Y., announces the release of a new circular: G-521, "Diazo Brilliant Blue BBLA-CF." The bulletin describes the item as a new domestically manufactured homogeneous diazo color, which, when applied to cotton, rayon or other vegetable fibers and developed with Developer AMS or with beta naphtol, produces unusually bright greenish blue shades with better wash fastness than is obtainable with other diazo blues.

Use Of Compound G-4 Outlined In Bulletin

The use of Compound G-4 for mildewproofing and rotproofing is described in Technical Bulletin 48-3, just issued by Sindar Corp., 330 West 42nd Street, New York City. Compound G-4 is a chlorinated phenol which has the structural formula, bis (five - chloro - two-hydroxyphenyl) methane. According to the bulletin, which is available upon request, Compound G-4 was developed as an antiseptic, germicide and fungicide for use by the pharmaceutical and disinfectant industries and was later applied to mildewproofing textiles and leather goods. The bulletin covers chemical and physical properties, toxicity, fungicidal activity, methods of application, formulas for consumer use, antiseptic finishes and methods of analysis. A bibliography is also included.

New Type Of Feeder Being Distributed By Dodenhoff

W. D. Dodenhoff Co., Inc., Greenville, S. C., and Maywood, N. J., has announced the acquisition of exclusive national distribution rights to the Fiber Meter, a new type of feeder which incorporates an automatic weighing mechanism to make possible more accurate, uniform blending than can be done by other methods. This new device is manufactured by the Houdaille-Hershey Corp., Buffalo, N. Y., one of the country's leading producers of automotive and aircraft equipment. The Fiber Meter will handle from 200 to 500 pounds of fiber per hour, delivering it to the blender in any desired unit of from eight to 32 ounces. A battery of them—one for each of the fibers to be fed—will exactly proportion the fibers and deliver them to the blender simultaneously, it is claimed. Since the blender is fed in precisely measured small quantities, the homogeneity of the finished product is assured.



The weighing mechanism is extremely accurate since, because of the ingenious methods by which it is mounted on spring steel straps, it is virtually free from friction. This friction-free characteristic would obviously result in excessive vibration of the weighing mechanism were it not for a viscous damper which takes command and almost immediately brakes the movement and returns the balance to a static position. This principle of viscous damping is an exclusive development of the Houdaille-Hershey Corp. and has been widely applied to minimize crankshaft vibration in both gasoline and diesel engines.

The Fiber Meter introduces automotive and aircraft principles of strength, rigidity and light weight to the textile machinery field for the first time. The body is of heavy gauge steel, welded construction. The entire electrical system, driving mechanism and functioning parts such as spiked apron, comb and doffer are fully enclosed, reducing fire hazard and promoting cleanliness and safety. The interior is designed for easy cleaning and is lighted. Operation is completely visible through plexiglas windows. The comb is dynamically balanced for

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smoothness of operation, and tests have shown that the fibers are pre-fluffed better than they are by standard feeders, the company states.

The electrical system including solenoids, mercury switch, starting box and one h. p. motor are of standard make and the finest obtainable. Bearings are ball type, self-aligning with an excellent grease seal making lubrication necessary only at long intervals.

The Fiber Meter is light in weight and movable. It can be mounted on casters if desired, although most users prefer to set it up in a permanent position. W. D. Dodenhoff, president of the W. D. Dodenhoff Co., reports that news of the Fiber Meter has aroused widespread interest among textile companies. Several installations have already been made in Southern mills.

Textile Machinery Firm Planned For Camden, S. C.

The probable establishment in Camden, S. C., of a plant for the manufacture of mill machinery and other textile mill equipment was announced recently by William S. Whiting, who revealed that a tract of land adjacent to the Southern railroad in Camden had been purchased as a possible site. Mr. Whiting, a former engineer with Sonoco Products Co., Hartsville, S. C., declined to elaborate on the projected plan other than to state that it would be of considerable size and would eventually employ about 2,000 persons.

Warwick Chemical Co. Moves Office Quarters

The Warwick Chemical Co., division of Sun Chemical Corp., recently announced the removal of its offices from 580 Fifth Avenue, New York City, to the Sun Building located at 10-10 44th Avenue, Long Island City, N. Y. The telephone number is Stilwell 6-1100. The increased scope of Warwick operations necessitated these larger quarters. The adjacent facilities of the laboratories will enable Warwick to enlarge its extensive technical consumer services.

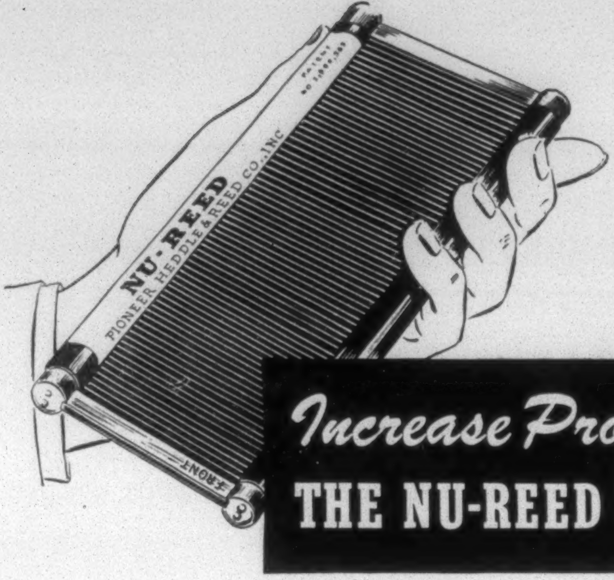
Warwick Chemical Co. manufactures textile chemicals, including the well-known water repellents, Impregnole and Norane. Warwick operates manufacturing plants in West Warwick, R. I.; Wood River Junction, R. I.; Rock Hill, S. C., as well as petroleum refineries at Chanute, Kan., and Kilgore, Tex.

Bijur Lubricating Corp. Presents New Bulletin

"Metered Lubrication of Textile Machinery" is the title of a new bulletin, 6A, recently distributed by Bijur Lubricating Corp., 43-01 Twenty-second Street, Long Island City 1, N. Y. The bulletin was especially prepared for the mill man to show typical applications of central lubricating systems in each phase of the textile industry.

Foxboro Instruments Measure Roll Surface Temperatures

Instruments for the accurate measurement and control of roll surface temperatures of calenders, dryers, and similar roll-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type machines, have been announced by The Foxboro (Mass.) Co., industrial instrument manufacturer. Bulletin 405, which will be sent on request, describes and illustrates recorders and controllers, typical installations, and the new-type measuring head which gives the Foxboro equipment its high sensitivity. In operating ranges between —40° F. and +350° F., and at all ordinary operating speeds, continuous temperature measurement is assured within two degrees, and even higher accuracy is possible in individual installations, depending upon conditions.

The measuring head is a small box-like unit, faced with low-friction material and containing a tiny but durable resistance element contacting a T-shaped spring of thin stainless steel, chromium plated. Pressure against the machine roll is constant and sure, but so light that no marking of the equipment or goods is incurred. The measuring head is connected by three-wire cable of any length with a standard Foxboro Dynalog Temperature Recorder, with which a Model 40 Controller, of any control-action type desired, may be combined.

Numerous important advantages are claimed for the Foxboro equipment over previous methods of roll surface temperature measurement. The measuring head is said to have higher accuracy than any other known device of similar purpose. The effects of ambient temperatures, friction, radiation, and operating speed are virtually negligible. Installation is simple, and no maintenance care is required beyond ordinary good housekeeping practices. The rubber, textile, plastics, metals, paper and food industries are among those which a reliable method of continuous roll surface temperature measurement is of special importance and value.

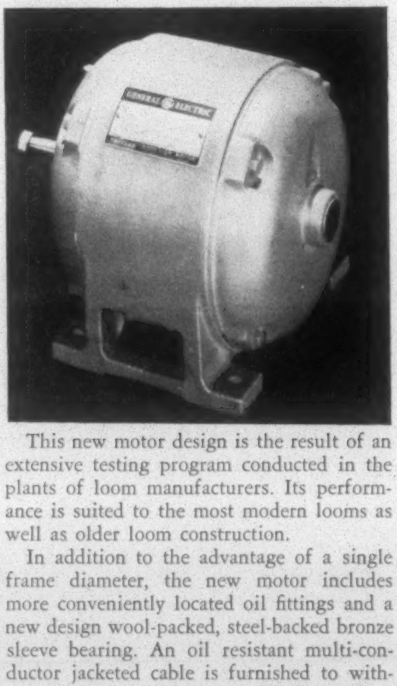
Yale & Towne Presents New Worksaver Truck

The materials handling division of the Yale & Towne Mfg. Co., Philadelphia, Pa., has recently introduced a new Worksaver truck for handling both skids and pallets. The new Worksaver was designed to solve three basic problems with which manufacturers are confronted: (1) the problem of handling both skids and pallets when plants are converting from skid systems to pallet systems but wish to continue using the remaining skid inventory; (2) the problem of receiving and shipping materials on suppliers' or customers' skids or pallets when the plant uses the opposite system; and (3) the problem of co-ordinating skid and pallet systems when both systems are used in different departments within the plant.

The new combination walkie is essentially a pallet-type Worksaver. It has been fitted with a simple fabricated super-structure which lets down over the pallet lifting-frame to make the unit suitable for handling skids. The standard model can handle skids from six to 12 inches high. When not in use the frame locks neatly into a vertical out-of-the-way position and the truck can be used for handling pallets. Forward and reverse speeds of the Worksaver are controlled from the handle of the truck. Lifting is controlled from a switch located on the front of the truck body. Both motivation and lifting mechanisms are electrically operated.

General Electric Offers New Tri-Clad Loom Motor

A new totally-enclosed Tri-Clad loom motor specially designed to meet the particular requirements of loom operation has been announced by the small and medium motor divisions of the General Electric Co. Although covering the entire range of two h.p. 1,800 r.p.m. and smaller, all ratings are built in a single frame diameter with but two axial lengths. This permits changing horsepower or speed ratings on a particular loom to suit mill requirements with minimum loom modification. All ratings are available for foot mounting or for three-arm suspension.

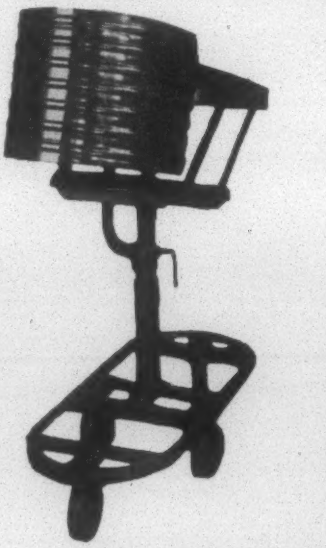


This new motor design is the result of an extensive testing program conducted in the plants of loom manufacturers. Its performance is suited to the most modern looms as well as older loom construction.

In addition to the advantage of a single frame diameter, the new motor includes more conveniently located oil fittings and a new design wool-packed, steel-backed bronze sleeve bearing. An oil resistant multi-conductor jacketed cable is furnished to withstand the heavy vibration met in loom applications. The smooth contour of the frame and end-shields presents a modern appearance, and the shorter length of the motor permits a saving in aisle space. All standard ratings are available from stock. Additional information on this motor is given in GEA-5011.

Durant Brochure Describes Firm's Counting Devices

Durant Mfg. Co., 1929 North Buffum Street, Milwaukee, Wis., recently has published a textile counter brochure illustrating and describing its pick, hank and course counters, yardage, rotary and several other types of Productimeters used in textile processing. This informative brochure will be of interest not only to the various mills, but also to textile machinery manufacturers.



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Durant has been producing counting devices since 1879. Sales offices representing the firm in the South include Comer Co., Atlanta, Ga.; J. T. Sudduth & Co., Birmingham, Ala.; Herndon Machinery Co., Charlotte, N. C.; and Robbins & Bohr, Chattanooga, Tenn.

Thompson Pump Features Listed By Waterous Co.

The Thompson pump, manfactured by the Thompson Pump Division, Waterous Co., St. Paul 1, Minn., has a number of features which, the company claims, make it ideal for pumping size to the slashers. Listed as exclusive features of the Thompson pump are: slow speed, crescent type rotors having no metal-to-metal contact within the pumping chambers reduce rapid wear usually caused by abrasive conditions of the size; and spring loaded seals which reduce shaft friction and leakage.

Houghton Lubricants Are Described In Bulletin

E. F. Houghton & Co. has issued a new four-page folder on lubricants for textile machinery. The folder deals with the objectives of textile mill lubrication and contains photographs of typical applications of Houghton's textile lubricants.

The back cover is devoted to a new textile lubrication chart, offering recommendations as to the types of lubricants needed for various textile machines. Copies of the folder are available upon request to E. F. Houghton & Co., 303 West Lehigh Avenue, Philadelphia 33, Pa.

Textile Insurance Co. Is Organized In North Carolina

Textile Insurance Co., High Point, N. C., a casualty company, was chartered March 16 with an authorized capital of $1,000,000. Signing the charter were 110 leading industrialists, business and professional people representing 44 counties of North Carolina. In 1946, it is reported, all lines of casualty insurance premiums in North Carolina totaled $28,800,000, and only 1.18 per cent, or about $340,000, was written by North Carolina companies. The new corporation was organized for the purpose of keeping more of the casualty insurance business, its assets and jobs, in North Carolina; to render service equal to any with emphasis on accident prevention and rehabilitating the injured workers.

Selection Of Ovens Explained In Manual

A new planning guide for production people concerned with heating, heat treating, baking or curing problems—purported to be the first manual of its type ever offered to oven users—has just been announced by Gehnrich & Gehnrich, Inc., under the title of *How To Select The Right Oven For Your Process.* The manual discusses: the four basically different types of oven heating systems; when to use which; the different heating media; temperature and safety control; insulation; the material-handling problem; interesting ingenuities; the action

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of different products under heat (chemically, physically, metallurgically, structurally); and the seven basic oven and heater types.

Types of industrial enterprises which will find the new manual especially valuable include textile coating firms, and others who use oven equipment operating at temperatures from 250° to 1150° F. Liberally illustrated, the 32-page two-color book includes: 43 drawings and diagrams, 23 photographs, seven oven selection tables, and numerous important definitions and listings.

Requests for copies should be addressed to Herman Gehnrich, Gehnrich & Gehnrich, Inc., 3232 57th Street, Woodside, L. I., N. Y.

Remington Rand Improves Visible Record Equipment

New design improvements in visible record equipment for business control systems have been announced by the systems division of Remington Rand, Inc. Trade-named Kardex Imperial, the re-styled line retains the familiar pockets with which visible bar chart signals may be used, and other basic features of the previous models—but adds several unique operating conveniences. These include shorter slides for easier access in posting entries to record cards, an ingenious new slide extension that makes insertion or removal an easy one-hand operation and new pre-scored pockets that lie back flat the first time used without need for "breaking in." The new Imperial line offers housing for all four popular widths of visible records: five, six, eight and 11-inch. Over-all construction embodies lightness and superior strength.

Kardex Imperial units are available in two heights: full and half-size. Slides may also accommodate interlocking Chaindex records for the ultimate in compactness. In all models, doors may be substituted for the top slide and locked to prevent unauthorized reference. In keeping with the thoroughly modern appearance of the units, smoothly rounded corners and lucite label shields, is Remington Rand's standard cabinet finish, Gray-Rite. This is a color-engineered finish that harmonizes with light surroundings as well as with traditional dark colored office furnishings.

New Catalog Offered By American Instrument Co.

A new catalog, published by American Instrument Co., Inc., Silver Spring, Md., describes numerous scientific instruments for use in chemical and materials testing laboratories. The publication is generously illustrated and includes comprehensive data on general laboratory equipment. Included are many special features not ordinarily found in catalogs of this type, and which are of special interest to laboratory workers in general.

The detailed descriptions of hundreds of instruments makes this new Aminco Catalog 48 a valuable guide for the selection of scientific instruments for research, testing and quality control. The catalog is available free of charge to laboratory workers requesting it on business or professional stationery, giving name, title, business affiliation, and complete address including postal zone number.

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Perfarmance Record Of Micro-Spray Paint Gun

An entirely new paint spray gun which makes possible a smoother, higher-gloss finish has been announced by American Brake Shoe Co., Kellogg Division. Fourteen exclusive features of the Micro-Spray paint gun reduce costs and increase production by saving money, saving paint, saving air and saving time. Complete details are available in literature, supplied on request to the company, American Brake Shoe Co., 230 Park Avenue, New York 17, N. Y.

New Booklet Classfies All Hercules Products

A new Hercules Powder Co. products book, which classifies all of the company's chemicals by family groups, is now available. Approximately 100 chemicals are described in the new book. Among the family classifications into which products are divided are cellulose, synthetic resins, terpene solvents and chemicals, and chlorinated products. All of the products lists are briefly described as to chemical make-up, uses and potential applications.

A. M. A. Pamphlet Analyzes Employee Retirement Plans

A report of current thinking by management and labor on employee retirement plans was published recently by the American Management Association under the title, "Trends in Retirement Planning." The 32-page publication discusses employee, company, and union attitudes on retirement plans and presents an analysis of trusted plans, insured plans and methods to achieve lowered premium costs.

Authors include Ivan L. Willis, vice-president, International Harvester Co., Chicago; Esmond B. Gardner, vice-president, Chase National Bank, New York; Maurice

F. Lipton, director, group annuities, Equitable Life Assurance Society of the U. S., New York; and John W. Culkin, vice-president, Gurney Overturf & Becker, Buffalo. "Trends in Retirement Planning," Insurance Series Number 73, is available at the American Management Association, 330 West 42nd Street, New York 18, N. Y., at 50 cents a copy.

Ames Thickness Measures Available In Four Models

The addition of two .0005-inch graduated models, a simple "O" adjustment, and fixed parallel contacts feature the improved line of dial thickness measures being marketed by B. C. Ames Co., Waltham 54, Mass. The new models are said to be especially suited for accurate measuring of fibers. Weighing only one and one-half ounces and with a case thickness of only one-quarter of an inch, these pocket-watch-size visual micrometers enable the user to make impersonal on-the-spot measurements of felt, cloth, paper, plastics, etc.

Introduced by Ames ten years ago, these precision instruments have found wide acceptance because of their unique adaptability to diversified measuring requirements. Anyone can operate them, since attainment of accurate readings is independent of the human factor. The index finger, drawn back on the knurled wheel, raises the upper anvil, permitting insertion of the piece to be measured; lifting the finger releases the wheel and allows a uniform spring pressure to close the upper anvil onto the work surface.

The contacts are one-quarter of an inch in diameter. A direct-reading count hand permits fast readings to be obtained anywhere within the .3125-inch (5/16-inch) range of the gauge. Dials are large, 1⅝ inches in diameter, and easily read. The case is an aluminum forging, with all outside surfaces fine-ground and polished. In addition to the two .0005-inch graduated models, which have dials reading 0-40 and 0-50, there is a .001-inch graduated model having dial numbered 0-100. Also a metric model graduated in .01 millimeter, dial numbered 0-100 and with a range of eight millimeters.

Decimal equivalents are stamped onto the back of the case on the English-measure models. An attractive, grain-leather, snap-button case is provided; also instructions for operation.

A. S. A. Offers List Of Approved Standards

An up-to-date list of all national standards approved by the American Standards Association has just been published and is now available free of charge, Vice-Admiral G. F. Hussey, Jr., U.S.N. (Ret.), secretary of the American Standards Association, announced recently. The American standards listed have been developed through the procedure of the American Standards Association by the national groups in each of the fields covered, which include electrical engineering, chemicals and textiles. The "all party-at-interest" procedure of the association has assured their acceptance by a consensus of all groups concerned and has given the standards included in this new list the standing of "American Standards."

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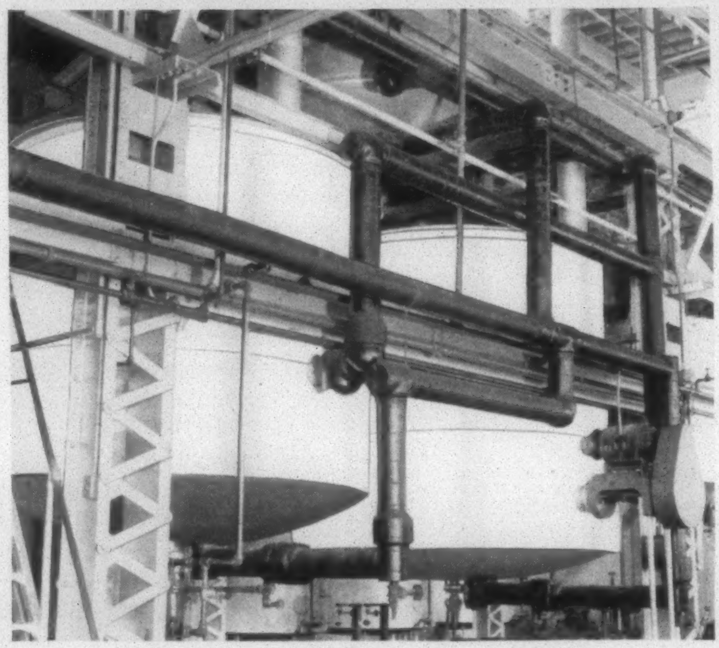

Stainless Steel sulfonator and wash tanks as unit, showing steam, water and caustic piping.

Correctly specified and fabricated, *stainless steel* overcomes many product difficulties. With non-corrosive *stainless steel* . . . . colors run true in successive runs and sensitive chemicals and dyes remain unaffected by metallic contamination. *Stainless Steel* is stronger, reduces repair and maintenance costs and its longer earning life repays initial costs quickly.

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Theories Of Spindle Dynamics Surveyed

A survey of some of the theoretical concepts relating to spindle dynamics is contained in a report now on sale by the Office of Technical Services, Department of Commerce. The survey was designed to help clarify and evaluate spindle problems. The 14-page report is a translation by Julian F. Smith of an article by J. Raible of Vereingte Kugellagerfabricken A. G., Bad Cannstatt, Germany, which appeared in a German publication in January, 1936.

The entire spindle problem, according to the report, would be very simple, or would not exist at all if there were no irregularities in the yarn load, but such irregularities always exist. The dynamic properties of spindles are therefore surveyed with reference to the existence of load irregularities in rotating masses.

The problem of relating spindle dynamics to spindle design in order to meet all the spinner's requirements is not simple, the article points out in a discussion of practical considerations. The spinner gives preference to the most quiet-running spindle, drawing no great distinction as to whether irregularities result from vibration or from gyroscopic motion of the spindle shaft. Since unwanted motions are a nuisance, causing the spinner to fear yarn breakage, uneven yarn and other defects, practical demands give rise to contradictory requirements. The rotating mass should have the greatest possible ease of adjustment, but the requisite allowances for play are then a source of trouble in practical operation. In addition, the spindle shaft, which must not be particularly thick, may be subjected to severe stresses if the bobbin is doffed carelessly. Furthermore, bearings must be reliable and possess the longest possible service life.

The following properties and concepts of spindle dynamics are discussed in detail: Rotation around a free axis, rigidly mounted materials axles, vibration, critical speed, rigid spindles, flexible spindles, gyroscopic motion, spindles as gyroscopes, stresses and spindle motion and damping oscillations. Experiments are cited to illustrate many of the properties.

Mimeograph copies of the report (PB-86030, *Spindle Dynamics*) sell for 75 cents. Orders for the report should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order payable to the Treasurer of the United States.

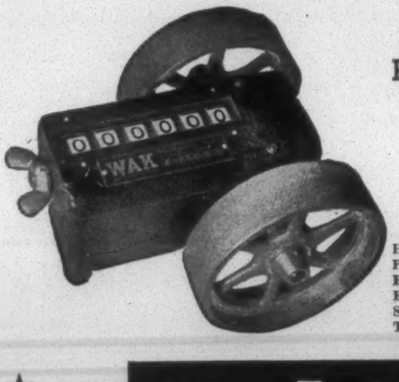
Exhibit Old French Printed Textiles

A collection of old French printed textiles known as the "toiles de Jouy" will go on exhibit at the Cultural Division of the French Embassy, 934 Fifth Avenue, New York City, beginning June 11 and will remain there until July 15. The toiles, belonging to Mrs. Agnes Holden of New York, who has been collecting rare textiles of this kind for over 20 years, are rich in artistic and historical interest, and represent one of the most delightful decorative arts of the 18th century.

The vogue for painted and printed cotton and linen fabrics in Europe began with their importation from India by the Dutch, English and French East India companies in the 17th Century. Before that time, cotton cloth, printed from wood blocks or resist-dyed was known in Europe, but dyes were impermanent, and the handicraft, considering its later development, was not important except as a training for later work. It remained for the design and color of the brilliantly painted and dyed fabrics of India (later reproduced by French artisans) to make cotton popular in France.

So popular did these textiles become that the manufacturers of silks, velvets and woolen cloth, fearing the destruction of their industries, brought pressure to bear on the government to prohibit the manufacture and sale of printed cotton cloth. By 1686, these manufacturers had won their point, and many French artisans, unable to continue their work in France, emigrated to England, Switzerland and Holland.

The fashion, which might have died, took on new life as a result of these interdictions. Smuggling prints from India became a major business and "bootlegging" of domestic copies was a source of great profit. Factories, both secret and more or less open, sprang up to meet the unprecedented demand. They existed even in the Palais Royal, the palace at Versailles, and at Fontainbleau. The French Ministers who had signed the edicts forbidding the manufacture of printed cottons nevertheless decorated their country homes



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with toiles, and fashionable women wore printed cottons in the country, since it was too dangerous to wear tnem in more public places. After some 70 years of bitter warfare between the public and the French Government, the former won out; restrictions were lessened and by 1759 removed completely.

In the same year, the famous Oberkampf factory at Jouy was established. Christophe-Phillipe Oberkampf, the son of a Bavarian cotton printer and dyer, had come to France in 1758, and it was his success in other establishments with fast dyes which was partly responsible for the removal of the edicts. The *toiles de Jouy* immediately won the favor of the court and in 1783 the establishment was designated as a royal manufacture. Marie Antoinette and other members of the court visited the print works to pick out their favorite designs. Oberkampf was decorated by Louis XVI and in 1806 by Napoleon, who presented him with the Cross of the Legion of Honor. Notwithstanding the favor of the emperor, however, the disorganized economic conditions resulting from the Napoleonic wars were the beginning of the dissolution of the plant at Jouy which nevertheless continued in existence until 1843.

Oberkampf was said to be the first to introduce scenes from French life and history as subjects for textile designs. To produce such designs for printing from copper plates—a process introduced at Jouy in 1781—an artist was needed, and Oberkampf called to his aid some of the best known artists of the period, among them Huet, Le Bas, Prudhon, Horace Vernet, Pillement and others.

Huet, 25 of whose toiles are shown in this exhibit, was considered the most gifted of the decorative painters of the period, and his charming pastorals, his accurately and delightfully drawn animals, his romantic and classical figures, made of cotton printing an art in itself. Huet himself engraved the copper plates from his cartoons, and it is to this that we owe the beauty of line of the toiles of his design.

During the recent war, many beautiful old fabrics, as well as other works of art and historical source materials in France were the victims of widespread destruction. Old copper plates from which such fabrics as the *toiles de Jouy*

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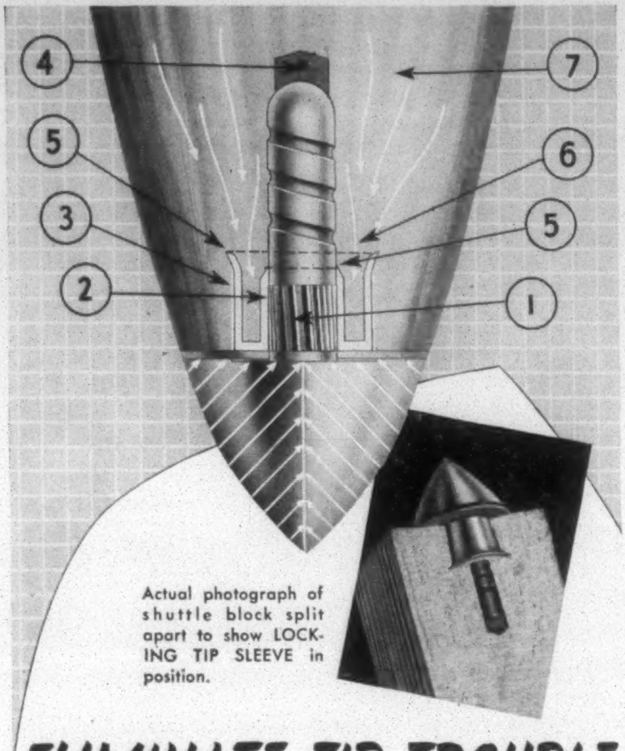

Actual photograph of shuttle block split apart to show LOCKING TIP SLEEVE in position.

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Loose shuttle tips, the cause of checks and cracks, warp breakage and a threat to the safety of the weaver, are things of the past. This new and exclusive Watson-Williams feature, the LOCKING TIP SLEEVE, anchors tips forever, and insures against loss of production time, idle looms, and costly drawing-ins. Study this Watson-Williams improvement carefully. Request LOCKING TIP SLEEVES on your next order.

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❸ Relief in shuttle block .030" larger than sleeve eliminates strain from sleeve expansion.
❹ Hole .201" drilled into shuttle block end, with air vent, permits tight fit for tip shank.
❺ Bevel of 30° on end of inner sleeve, turned toward center, hugs tip shank and forces wood between inner and outer sleeve. Outward bevel of 30° forces outer sleeve end to expand bell shape and further compress wood, when driven into the solid block.
❻ Wood compressed.
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Because sleeve is forced into wood, pressure on tip shank increases while shuttle is in service.

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were printed were seized by the Germans in their search for metals. The existence of a collection such as Mrs. Holden's, therefore, becomes all the more valuable. The exhibit at the French Cultural Services will be open to the public from 10 a. m. to 5 p. m., Mondays through Fridays, June 11 until July 15.

Report On German Machinery Improvements

A comprehensive report on recent improvements in German staple fiber processing machinery, many of them of interest to American industry, is now on sale by the Office of Technical Services, Department of Commerce. The report was prepared by Oscar von Kohorn and Joseph L. Costa of the Oscar Kohorn Co., New York City, following an investigation in Germany under O. T. S. sponsorship. The investigation was made to find out the details of developments in German staple fiber machinery which resulted from the tremendous pre-war and war period expansion of that industry in Germany.

The large scale of staple fiber processing in Germany and the need for economizing on equipment suggests the validity of German techniques which "should be basically useful throughout the world to a rapidly developing industry," the investigators state. Spinning machines, cutters, after-treatment machines, openers, driers and baling presses are described in the first part of the report. Among developments of interest is the Grusschwitz or "Gru-Gru" cutter which is used with practically no complaints in nearly all German plants. The positiveness with which the tow is held and fed at the point of cutting and the simplicity of parts exposed to acid has won the cutter almost unanimous approval, according to the report. No water is fed with the tow. The only complaints against the machine concern problems connected with the rubber-covered steel wheels and their tendency to chip and deteriorate. Different sets of wheels are used for cutting different fiber lengths.

Another development, cited as of special interest by the authors, is a three-stage type baling press with a capacity of 20 tons per 24-hour day. The press operates in three distinct stages: (1) loading and prepressing of staple fiber, (2) pressing, and (3) unloading of the bale. The three stages or housings are equally spaced 120° apart, and mounted on a turntable which can be turned and locked in each position. As the housing with the prepressed bale is turned from position one to position two, an empty housing from position three arrives at position one while another housing with the completely pressed bale is placed in position for unloading.

The second portion of the report discusses raw material and utility requirements for manufacturing staple fiber. Practically all German firms were conscious of their total water consumption and the need for reducing it, but, on the whole, the expansion of the German staple fiber industry has not included well worked out water systems. At one modern plant at Lenzing (Austria) water consumption is about 400 liters per kilogram of finished staple. At an older plant at Kelsterbach, it is 1,000 liters. Steam and power, conditioning, ventilation, refrigeration, caustic soda, carbon bisulfide, and the spin bath are also discussed.

Part three of the report describes carbon bisulfide recovery equipment and methods in considerable detail. All German plants practice carbon bisulfide recovery and probably 30 per cent recovery is achieved in most cases, according to the report. Two basic types of collecting systems are used involving recovery from the tow or recovery from the cut flakes. The actual recovery takes place either by condensation of the water and carbon bisulfide vapor mixture or by activated carbon absorption. Some of the latest systems being installed point the way to the recovery of virtually all free carbon bisulfide in the fiber at the point of recovery, the report states.

Part four of the report describes continuous Lurgi vacuum crystallizers installed by the firm, Spinfaser A. G., at Kassel-Bettenhausen to recover 120 tons of Glauber salt from the spin bath daily. The three German firms using these crystallizers were well satisfied with them, the investigators report. Complaints centered around defective linings, especially in the rubber lined type, and the fact that the machines were not easily operated at reduced output.

The report contains 26 photographs and 42 drawings and diagrams of the machinery described. The appendix lists 19 other related reports by British and American investigators, and also lists the subject matter in a microfilm reel of German documents which supplements the report. The related reports and microfilm reel are available from the Office of Technical Services. The appendix also contains three German technical papers (with some notations in English) on a three-section single-apron drier with humidifier, a Kiefer canal cake drier, and a special report on the continuous-spinning process developed to pilot plant operation by Vereinigte Glanzstoffabriken A. G.

Mimeographed copies of the report (PBL-85168, *Spinning, After-Treatment and Euxiliary Equipment for Staple Fiber Viscose Rayon Plants in Germany,* 174 pages) sell for $4.50. Orders should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order payable to the Treasurer of the United States.

Revise Standard For Cotton, Rayon Velour

The recommended revision of Cotton and Rayon Velour (Jacquard and Plain) Commercial Standard CS103-42, has been approved for promulgation, according to an announcement of the Commodity Standards Division of the National Bureau of Standards. The revised commercial standard will be identified as CS103-48, Rayon Jacquard Velour (With or Without Other Decorative Yarn) and is effective for new production from May 20, 1948.

The original standard was developed in 1942 to provide a minimum quality of cotton and rayon velour used chiefly in the manufacture of upholstered furniture. It included requirements for weight of finished fabric, weight and density of pile, construction of the fabric back, colorfastness, and resistance to wear.

The present edition was undertaken at the request of the Upholstery and Drapery Fabric Manufacturers Association, Inc., to cover a higher quality of this material as a minimum standard for the industry. Its requirements are based on the same characteristics as the previous edition, but in order to maintain a higher quality the number of pile tufts and the number of picks have been increased. A change is also made in the current edition in the method of taking test specimens. Provision is also made for methods of test and for certifying and identifying materials conforming to the commercial standard.

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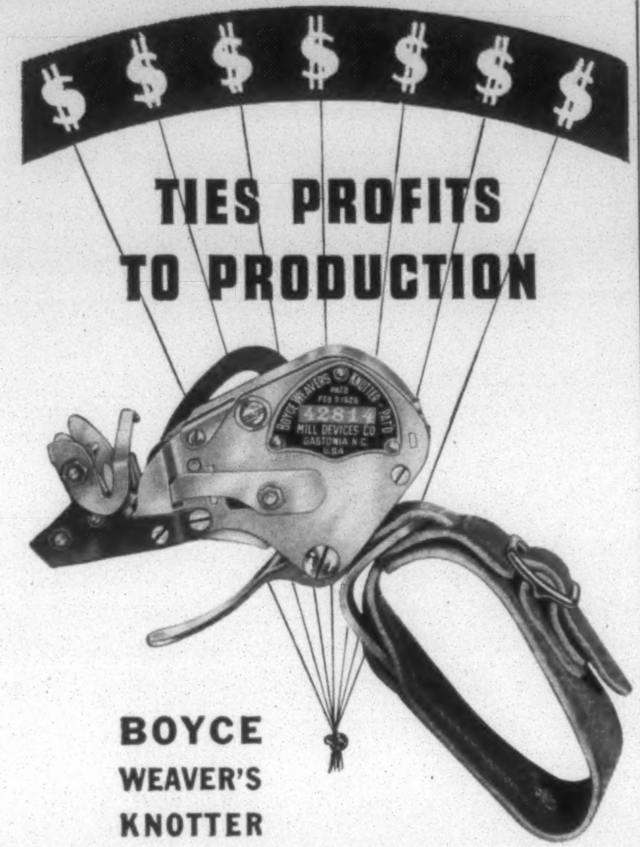

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Georgia Cotton Manufacturers Elect Harvey

R. Donald Harvey, left, general manager of the Pepperell Mfg. Co. unit at Lindale, Ga., was unanimously elected president of the Cotton Manufacturers Association of Georgia at the 48th annual meeting of the group held May 5-7 at Daytona Beach, Fla. Mr. Harvey succeeds Charles C. Hertwig, president of Bibb Mfg. Co. at Macon, Ga. More than 400 mill executives and representatives of allied industries attended the event which was pervaded by a spirit of optimism and a growing awareness of the effects of current international events on the domestic scene.

Members of the Georgia association were praised for their sound, steady advancement during the past year by Mr. Hertwig in his annual president's report, which officially opened the convention, and were cautioned to be alert to combat the "disciples of unsound ideologies who are becoming more vocal in our country, and who frequently infiltrate into our political life."

Following the annual report of the president, principal speakers for the opening session were H. L. Wingate, president of the Georgia Farm Bureau Federation, Macon, and Raymond R. Paty of Atlanta, chancellor of the regents of the University System of Georgia. Continuation of the farm guarantee, not as a protection against scarcity, but to stabilize the income of the farmer and the nation's economy was urged by Mr. Wingate. "Had we had such a program in 1920-1921 when, in 90 days, the price of cotton dropped from 40 cents to eight cents a pound, the nation's economy would not have been so disturbed," Mr. Wingate declared. "If we drop the farm program at the end of the year when it expires, you'd better grab your hat. We're headed for the bushes."

Mr. Paty commended the textile executives for their contribution to the more bountiful life of the working people of Georgia and expressed his pleasure with their contributions toward education as demonstrated in their assistance in building and equipping the new plant of the A. French Textile School at Georgia Tech. Through research, experiment and education can be insured the industrial gains now being made, he said.

Mr. Hertwig traced the history of the industry in Georgia from the days just prior to the Civil War when the state had 19 small cotton mills employing about 779 workers, to its present status as the largest payroll industry in the state employing over 107,000 persons.

"The textile industry of the South, and of Georgia in particular, has contributed more to the industrial birth and sound growth of this section than any other single industry," Mr. Hertwig stated. "It has been by far the leading factor in changing the South from a purely agricultural section to a section with an economy balanced between industry and agriculture, which is considered by economists as a most desirable condition for any community. We have striven to maintain this balance through peak production years and through years of depression, and no industry equals the textile industry of the South in its conviction that a sound agricultural development and a sound industrial development must go hand in hand. The two are dependent upon each other. Their interests are identical."

High spot of the convention's entertainment program was the annual banquet Thursday evening, May 6, with Mr. Hertwig serving as toastmaster. Principal speaker at this session was Dr. George D. Heaton, pastor of the Myers Park Baptist Church of Charlotte, N. C., who is well known in Southern textile circles. Prizes to winning contestants in the group's annual golf tournament were made during the banquet session and Mr. Hertwig was presented a gift in appreciation of his year's service to the association. Prize winners in the golf tournament were G. H. Smith of Pepperell Mfg. Co., who won low net honors with 90-20-70, and A. S. Durkee, Macon (Ga.) Textiles, who won low gross honors with a score of 80-7-73.

The concluding session of the meeting was featured by an address by Frank A. Constangy, prominent Atlanta labor relations attorney, followed by reports of the various association officers, committees and divisions.

Mr. Constangy discussed some of the activities of the Textile Workers Union of America in Georgia. "Instead of belaboring the textile industry because for the first time in 25 years it has been profitable, the C. I. O. should have been encouraging it to continue to prosper," he declared. "Instead of attempting to remold the South," he continued, "it should have attempted to conform to the South. Instead of attempting to get more for less, it should have been attempting to get more for producing more. It has failed to do any of these things and in its failure it has encouraged the opposition of Southern employers and workers alike. Its drive has failed."

Continuation of a vigorous public relations program for the Georgia association was recommended by Mr. Hertwig and the industry-wide program as a whole was discussed by Tom Yutzy, director, in reporting on progress made by the industry-wide committee on public relations. The textile industry deserves to be better understood and to receive better treatment in Washington, Mr. Yutzy told the group. He revealed that the committee is telling the cotton mill story by means of newspaper and trade paper stories and that a traveling photo exhibit will start on a tour of schools and chambers of commerce this Summer.

Other new officers of the association, in addition to the new president, include: N. Barnard Murphy of the Trion Division of Riegel Textile Corp., first vice-president; and L. G. Hardman, president of Harmony Grove Mills, Commerce, treasurer. T. M. Forbes and Frank L. Carter continue as executive vice-president and secretary, respectively.

Four new members of the board of directors chosen for those whose terms expire this year were: George E. Glenn of Exposition Mills, Atlanta; John P. Baum, general manager, Dublin Mills, Dublin; R. H. Jewell, vice-president, Chrystal Springs Bleachery, Chickamauga; and B. D. Banks, vice-president of the Grantville Mills, Graniteville. The outgoing board members were: W. C. Ball, treasurer, Pepperton Mills, Jackson; E. W. McMillin, president, Richmond Hosiery Mills, Rossville; Ellis H. Peniston, vice-president, Arnall Mills, Sargent, and A. J. Strickland, Jr., president, Strickland Cotton Mills, Valdosta.

Newly established standards of manufacture for tufted bedspreads will be adapted by the Tufted Textile Manufacturers Association, according to the *Journal of Commerce*. These standards will govern labeling and advertising as to size and color fastness.

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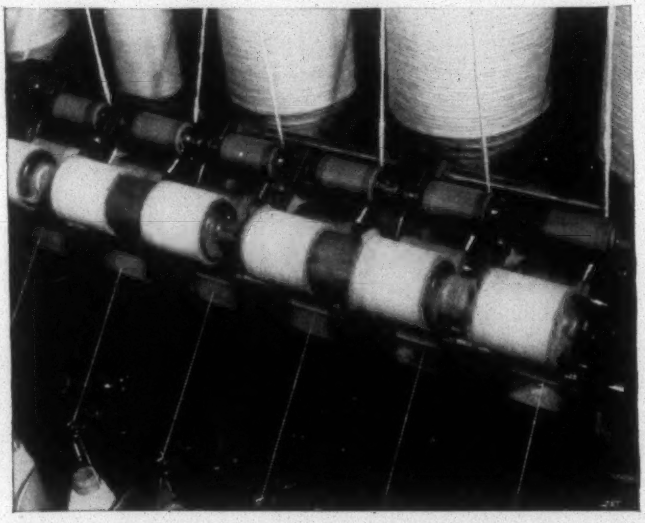

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Cotton, Rayon Goods Finished Near '46 Level

A total of 8,671 million yards of cotton, silk, rayon and other synthetic fabrics were bleached, dyed, or printed and finished during 1947, according to the Bureau of the Census, Department of Commerce. This total was about the same as the amount finished in 1946. Finishing of fabrics made of silk, rayon and other synthetic fibers totaled 1,757 million yards, which was two per cent above 1946. The statistics were compiled by the Bureau of the Census, Industry Division, from reports by finishers who bleached, dyed, or printed and finished cotton, silk, rayon and other synthetic fabrics. All known finishers in the industry were canvassed. Figures for 1947, based on a quarterly survey conducted by the Bureau of the Census, are preliminary. Final figures will be published as a part of the 1947 Census of Manufactures, which is now being taken.

The 3,573 million yards of cotton goods bleached and finished during 1947 was six per cent greater than in 1946. This was also the greatest amount of cotton goods bleached in any year since 1943 when 3,682 million yards were bleached and finished. Broadcloth, colored yarn fabrics, flannels and other napped fabrics, and sheetings and tubings showed the largest increases. Drills, twills and jeans, ducks, marquisettes and scrim, and osnaburgs reflected notable decreases. The 206 million yards of white finished silk, rayon and other synthetic fabrics was four per cent above 1946.

Plain dyed and finished goods totaled 1,764 million yards which was six per cent below 1946. This was the lowest amount of dyed cotton goods on record for any year since this series of reports was originated in 1943. The largest decreases were shown by drills, twills and jeans, ducks and poplins, repps and piques. Batiste, dimity, lawn, organdy and voile, broadcloth, corduroys, print cloths, and sateens showed the largest increases. Plain dyed and finished silk, rayon and other synthetic fabrics totaling 1,202 million yards was three per cent greater than in 1946.

The 1,576 million yards of printed and finished cotton goods was six per cent less than in 1946, but was greater than in any year 1943-1945. Drills, twills and jeans, marquisettes and scrim, osnaburgs and sateens reflected the largest decreases. Broadcloth, flannels and other napped fabrics, and poplins, repps and piques showed notable increases. The 349 million yards of silk, rayon and other synthetic goods printed and finished was four per cent below 1946.

Program For A. A. T. C. C. Annual Meeting

The program for the 27th annual meeting of the American Association of Textile Chemists and Colorists, to be held Oct. 21-23 at Augusta, Ga., has been announced as follows:

Thursday, Oct. 21—9:30 a. m., registration; 9:30 a. m. to 2 p. m., personnel service; 9:45 a. m., national council meeting; 12:30 p. m., luncheon, national and sectional officers and members of the national council; 2 p. m. to 5 p. m., general technical program; 5 p. m., annual business meeting; 7:30 p. m., informal dinner, presentation of Olney Award.

Friday, Oct. 22—9:30 a. m., registration; 9:30 a. m. to 2 p. m., personnel service; 9:30 a. m. to 12:30 p. m., technical program (two groups); 12:30 p. m., barbecue picnic; 2:30 p. m. to 5:30 p. m., technical program (two groups);

7:30 p. m., informal dinner, general research committee meeting.

Saturday, Oct. 23—9 a. m., meeting of executive committee on research; 9:30 a. m., registration; 9:30 a. m. to 2 p. m., personnel service; 9:30 a. m., intersectional prize paper contest; 7:30 p. m., annual banquet.

"Advancing Textiles Through Research" will be the theme for the annual convention of the A. A. T. C. C. The executive committee of the Southern sections, under whose auspices the convention will be held, has been announced as follows: general chairman, D. C. Newman, E. I. du Pont de Nemours & Co., Inc.; assistant general chairman, J. A. Franklin; banquet, Jack Anderson, Peerless Woolen Mills; dining, J. L. Wyman, Nova Chemical Corp.; entertainment, R. W. Philip, Callaway Mills Co.; exhibits, Sherman A. Converse, Graniteville Co.; finance, Charles A. Spratt, National Aniline Division, Allied Chemical & Dye Corp.; ladies, W. B. Griffin, Kail Mfg. Co.; printing, Junius M. Smith, TEXTILE BULLETIN and THE KNITTER; publicity, A. R. Thompson, Ciba Co., Inc.; reservations, T. R. Smith, Wiscassett Mills Co.; registration and reception, A. K. Haynes, Rohm & Haas Co., Inc.; technical program, V. B. Holland, Cannon Mills Co.; transportation, L. E. Whittelsey, Augusta Chemical Co.

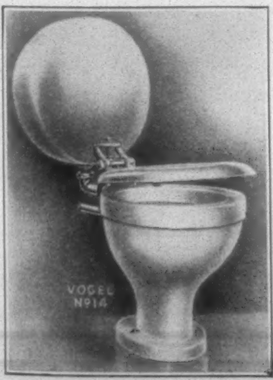
The Piedmont Section will hold its summer outing at the Ocean Forest Hotel, Myrtle Beach, S. C., June 18-19. In addition to bathing and fishing, members will enjoy dancing, shuffle board, tennis and golf. The nominating committee of the Piedmont Section recently mailed ballots to members offering the following slate of officers for 1949: chairman, P. E. Smith of Riegel Textile Corp., Ware Shoals, S. C.; vice-chairman, Robert H. Smith of High Point (N. C.) Chemical Mfg. Co.; secretary, Edwin A. Briggs of Southern Franklin Process Co., Greenville, S. C.; treasurer, R. H. Souther; councilor, J. B. Neely of Burlington Mills Corp.; custodian, A. R. Thompson of Ciba Co., Inc., Charlotte, N. C.; sectional committee—Kelly Traynham, J. C. Whitt, Chester Cobb and J. C. King.

Other A. A. T. C. C. news includes a report of two new devices to improve and simplify textile testing which are currently under development at the national laboratories of the group at Lowell (Mass.) Textile Institute. One of these devices is to gauge dimensional restorability of fabric more conveniently than on the larger machine. The other is a small instrument, different from the Launder-Ometer, which would give a more rapid test of washability.

Tennessee Chemists Hold Textile Session

Dyeing of textiles, oils and finishes used, detergents and fabric stabilization were among the subjects discussed at a textile session during the joint 1948 intersectional meeting of the Northeast Tennessee Section of the American Chemical Society and the East Tennessee Section of the American Institute of Chemical Engineers held May 7-8 at Bristol, Va. More than 400 chemists and chemical engineers were in attendance.

"The possibilities of further improvements of textiles by finishes are practically limitless," Dr. E. I. Valko, director of research of E. F. Drew & Co., Inc., Boonton, N. J., declared. Treatment of cloth with special preparations has enabled chemists to enhance almost any desirable property,



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he pointed out, citing availability of fabrics that resist bacteria, flame, water, shrinking, wrinkling, moths and mildew.

Discussing the application of oils to textiles in various processing operations, Dr. Valko emphasized that "we do not possess as yet exact quantitative knowledge as to the requirements of what textile oils should do, but considerably more is known regarding what they should not do. Textile oils should not damage the fibers nor the equipment; they should not discolor the fibers, and they should not cause unevenness of subsequent dyeing due to incomplete removal."

In a discussion of textile fabric stabilization, Leonard Shapiro, research director of Synthron, Inc., declared on the subject of wool shrinkage that wet chlorination methods have been the most successful in this country and that with modern processes and better control methods uniform, satisfactory results could be obtained. "The chlorination of wool is really an oxidation reaction employing sodium or calcium hypochlorite," he continued, "with pH values of two to 11 reported in various more or less successful processes. In general the higher pHs result in less shrinkage controls and more yellowing, while the lower pH values cause increased alkali solubility. Best results have been obtained at pH eight to ten."

Henry A. Rutherford, head of the textile chemistry and dyeing department, North Carolina State College School of Textiles, told the group that recent studies indicate that substantive dyes are bound by hydrogen bonds formed between the hydroxyl groups on the cellulose and, in all probability, the nitrogen atoms in the dye molecule. Discussing "The Dyeing of Textiles," Mr. Rutherford pointed out that, generally speaking, there is no great disagreement concerning the mechanism of fixation of dyestuff to the protein fibers (wool and silk), but that the nature of the dyeing of the cellulosic fibers (cotton and rayon), with substantive dyes, is a controversial issue.

W. M. Wadewitz, an officer of American Bemberg Corp. and North American Rayon Corp., presided over the textile chemistry session.

Sodium Silicate Uses Discussed At Meeting

The Western Carolinas Section of the American Chemical Society, at a meeting in Greenville, S .C., recently, heard a discussion of "Some Uses of Sodium Silicates in the Textile Industry" by Dr. R. C. Merrill, research manager of Philadelphia Quartz Co. Dr. Merrill gave the group a thorough description of the development of silicates from the early days up to the present and stressed chiefly the applications in water treatment and textile processes. Personnel from various textile finishing plants were invited as guests to hear Dr. Merrill's discussion.

Onyx-Mellon Fellowship Starts 15th Year

Fourteen years ago the Onyx Oil & Chemical Co. initiated the first of many research projects supported by this company in well known outside scientific institutions. The first project was opened at Mellon Institute in Pittsburgh, and it has been in operation continuously from then until the present time. During the years which have elapsed since this initial project, this policy of sponsoring research on important phases of the company's business in nationally recognized laboratories has been expanded to include investigations in many parts of the United States. The Textile Finishing Fellowship at Mellon Institute sponsored by the Onyx Oil & Chemical Co. was begun on Feb. 12, 1934. Deliberately separated by distance and by the institute fellowship system from the company's home laboratories and plant, work has been carried on by the fellowship which has resulted in new and improved products for the textile processing industries.

Early work included the development of methods for testing efficiency of water repellents, and as a result of this fundamental study of the characteristics of water repellency, the Onyx Oil & Chemical Co. has placed on the market outstanding products for this purpose.

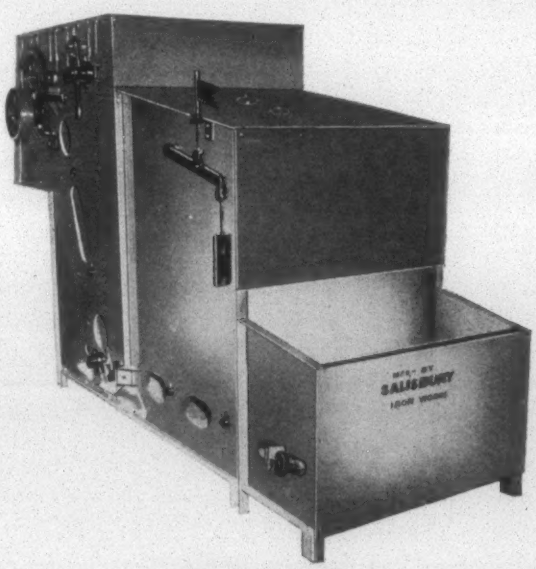
The study of sulfonation procedures by the Mellon Institute Fellowship has led to improvement of processes for the manufacture of several lines of anionic surface-active materials manufactured by this company. Cationic finishes giving permanent softness to cotton were developed from test tube experiments to full-scale production. A number of other types of surface-active materials have been developed by the Mellon Institute project which is currently studying materials which can be used to impart special finishing effects to textiles, and which will withstand laundering and dry cleaning operations for the life of the fabric. The Onyx Oil & Chemical Co. is proud of this record of the past 14 years, and confidently expects an equally productive period in the years to come in the development of new products for industry, and in the collection of significant scientific data pertaining to its production.

Scientists Taking New Role In Industry

Scientists today are taking a new role in the industrial leadership of America, Dr. Charles Allen Thomas of St. Louis said May 7 upon receiving the Gold Medal of the American Institute of Chemists. Speaking at the institute's silver anniversary dinner, held jointly with the New York Section of the American Chemical Society at the Waldorf-Astoria, New York City, Dr. Thomas said that scientists forced into administrative positions because of the complexities of modern industry must acquaint themselves not only with the unchanging laws of chemical reactions but also with the everchanging aspects of human behavior. Dr. Thomas is president of the American Chemical Society and executive vice-president of Monsanto Chemical Co. He recently was honored by being elected to the membership of the American Academy of Sciences.

"Modern industry," Dr. Thomas said, "seems to be stepping ahead with seven league boots. The merchandise, the service and the administration of modern business are so scientific and complex that technical training is needed in almost all departments." This is particularly true, he said, in the chemical, oil, biological, electrical and mechanical industries where men wtih Ph.D. and medical degrees are serving as executives.

The American Institute of Chemists elected the following officers: president, Lawrence H. Flett, director, new products division, National Aniline Division, Allied Chemical and Dye Corp., New York, N. Y.; vice-president, Dr. Raymond E. Kirk, head, department of chemistry, dean



SALISBURY ENCLOSED BLENDING FEEDER

Model S BF-1 Salisbury Enclosed Cotton Blendng Feeder is used for the processing of cotton, wool, and synthetics.

This machine has been designed by textile engineers long experienced in the development and operation of machinery for the textile industry. Salisbury Blending Feeders are precision manufactured of the finest quality materials and workmanship to render long and dependable service with a minimum of maintenance and operational cost.

GENERAL SPECIFICATIONS

The Salisbury Enclosed Blending Feeder has a heavy fabricated steel frame which makes it a rugged, durable, and trouble free unit. All gears and chains are covered with guards for safety.

Oilite bronze self-aligning bearings are used throughout, eliminating oil leakage and assuring clean fibres.

Provisions are made for the installation of automatic sprinkler head and vacuum lines. All usable waste fibres may be reclaimed from waste container.

Salisbury Blending Feeders are designed to allow installation of kick-off roll or combing attachment.

The machine may be used in a blending line or in combination with a picker.

This model is provided with ample storage space. This facilitates better blending of various fibres and requires less attention from the operator.

Model S BF-1 as shown is equipped with a lower or front apron which extends outside the storage chamber of the machine and has a small bin into which the raw material is placed by the operator. It is then carried into the storage chamber on the conveyor apron. This model also has a combing attachment as standard equipment.

This machine is manufactured of the finest material and workmanship and has proven its worth by satisfactory, trouble free operation.

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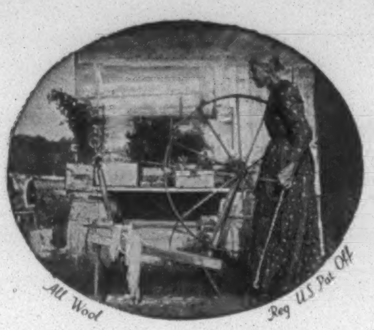

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Pyroxylin Coated Fabric Shipments Decline

Pyroxylin spread in March totaled 4.3 million pounds, according to the Bureau of the Census, Department of Commerce. This total was 13 per cent below the 5.0 million pounds spread in February and 34 per cent below the March, 1947, spread of 6.5 million pounds.

March shipments of 5.7 million linear yards of pyroxylin coated fabric materials were 12 per cent below the 6.5 million yards shipped in February and 28 per cent below the March, 1947, shipments of 7.9 million yards. Light cotton fabrics shipments of 3.0 million yards were 11 per cent below the 3.3 million yards shipped in February and 29 per cent below the March, 1947, shipments of 4.2 million yards. Heavy cotton fabrics shipments of 1.8 million yards were 13 per cent below the 2.0 million yards shipped in February and 29 per cent below the March, 1947, shipments of 2.5 million yards. Custom coating shipments of one million yards were 14 per cent below the 1.1 million yards shipped in February and 23 per cent below the March, 1947, shipments of 1.3 million yards.

Unfilled orders of pyroxylin coated fabrics on hand at the end of March, amounting to 5.2 million yards, continued to drop. This total is nine per cent below the 5.7 million yards on order in February and 54 per cent below the March, 1947, unfilled orders of 11.5 million yards.

Revise Palm Oil Import Restrictions

Authorization to import 5,000 metric tons of palm oil without restrictions as to end-use was announced May 4 by the U. S. Department of Agriculture. Probable uses of the 5,000 tons which may be imported without end-use restrictions will be in the manufacture of soap and textiles.

Wrinkle Resistant Finish For Cottons

The first wrinkle resistant finish which can be successfully applied to all types of cotton with little or no loss in tensile strength was announced recently by American Cyanamid Co.'s Textile Resin Department. Even seersucker when treated with this finish remains fresh after several wearings. The new finish, which goes by the name of Superset, also controls shrinkage to two per cent or under. Winkle resistant finishes have been widely used for rayon fabrics but up to now only heavy constructions of cotton goods could be made wrinkle resistant because previously marketed types of finishes seriously weaken the fabric.

The new finish has already been tested for more than a year on a wide range of standard fabric constructions with plant runs of substantial yardage. Among the fabrics that have been successfully made wrinkle resistant and stabilized to give shrinkage control are: ginghams, piques, jeans, dress goods, chambrays, prints, seersuckers, cords, twills, drills, denims, corduroys, and coverts. The finish is highly durable with effectiveness retained after many severe test washings.

According to Richard E. Sumner, manager of the Textile Resin Department, melamine resin forms the basis of the new Superset finish, modified in such a way that it does not affect the strength of the fabric. Tests show a very high anti-crease rating of from 3.0 to 3.6 in both warp and filling directions. In addition, a high degree of resilience is added to the cotton. A wide range of hand can be obtained all the way from the softer women's wear to the firmer men's wear effects.

Fabric produced in plant runs was made into garments last Summer and given extensive consumer tests. This included both men's and women's garments. It is on the basis of the experience gained during these tests as well as exhaustive laboratory tests that detailed information about the finish was obtained. Another characteristic of Superset textile finish which proved itself during these tests was that the treated fabrics dry cleaned excellently without anv loss of the effectiveness of the finish. Another benefit of the finish is that the treated fabric handles far better during cutting and sewing. Estimates of tailors and dressmakers who have worked on the fabric are, conservatively speaking, that the Superset finished fabrics can be worked 20 to 30 per cent more efficiently.

Processing requires no special equipment other than the curing unit which is standard equipment in most cotton finishing plants. At the present time a number of mills are going into production and large yardages will be in the hands of manufacturers for their early resort lines. The new finish will reach consumers on a large scale in the Spring and Summer of 1949. "The new finish is available to all mills and finishing plants, and necessary resins and technical assistance will be supplied to interested mills by the American Cyanamid Co.," Mr. Sumner stated.

Group Studies Peanut Fiber Development

The American Oil Chemists Society, at a meeting in New Orleans May 4-6, revealed that the imminence of a fabric made from peanuts has stimulated study of its development by the group. R. T. Miller of Peoria, Ill., president of the society, remarked "this artificial protein fiber handles good, feels good, dyes good, wears good—an uncommon feature in most synthetic cloths. Besides it has special properties that natural fibers don't possess—like being suitable for long-wearing hat bands."

Dr. K. S. Markley, head of the oil, fat and protein division of the Southern Regional Research Laboratory, which is working on development of the fiber, said that its properties are similar to those of wool in appearance and feel. "It dyes like wool, can be mixed with wool, cotton or rayon to give fabrics different properties," he said. "It has approximately the same dry strength of wool, but, like all synthetic wool fibers, it has much lower strength when wet, than wool. However, there are many uses for fibers in which wet strength is not of great importance, such as draperies, upholstering, velours for use on the ceilings of automobiles, hat feltings and any goods which are drycleaned." Research being done today is aimed at increasing the wet strength of the peanut fiber, he noted.

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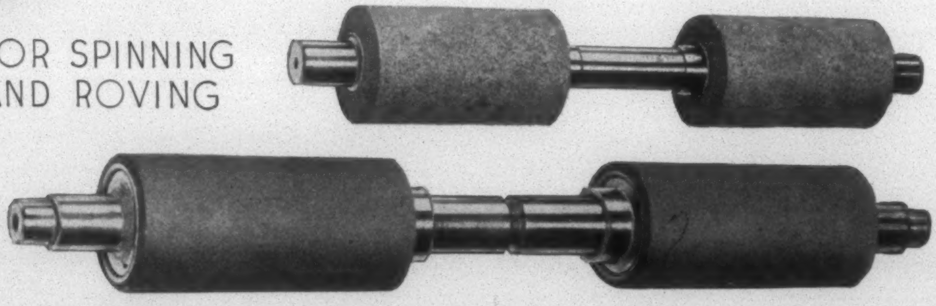

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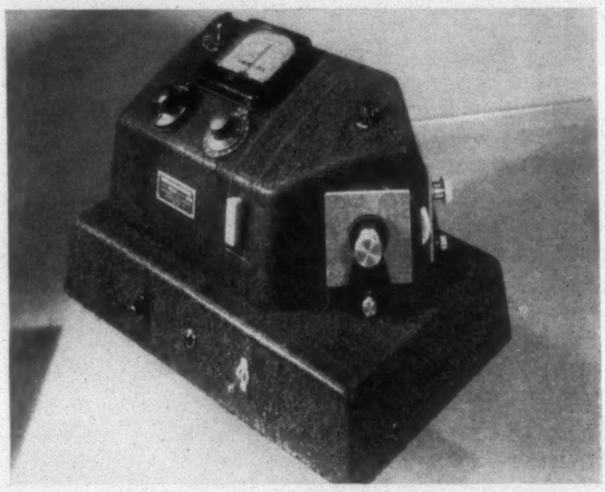
Photo-Electric Color Eye Is Developed

A scientific color brain, accurate to within one-half of one per cent, has been developed in the research laboratories of the Pittsburgh Plate Glass Co., it was revealed May 1 by S. Frank Cox, director of research for the Glass Division of the company. To be known as the PPG-IDL Color Eye, the new instrument photoelectrically records the response, sensitivity and discrimination characteristics of the human eye. With greater accuracy than the eye its measures color differences and divides by the total reflected light to give comparisons in terms of percentage reflectance difference, regardless of illumination level or color density.



Pittsburgh Plate Glass-Instrument Development Laboratories Color Eye.

Developed by P. W. French of the Pittsburgh Plate research staff in collaboration with the Instrument Development Laboratories, Inc., the new apparatus fills a long-felt need in the textile world and numerous industrial applications where accurate color matching has been almost solely dependent on the skillful use of the human eye.

The Color Eye is more accurate than its human counterpart in measuring reflecting samples as well as clear or diffuse transmission samples. In measurements where surface gloss is important a combination of diffuse and direct illumination is available at optimum angle of illumination recommended by color authorities. The instrument's normal sample area view is one-half-inch diameter but it can accommodate samples from one inch to several feet in size.

Color differences are read directly on a meter having two ranges. Approximate luminosity is read directly on a logarithmic scale from 0.1 to 100 per cent. Accurate luminosity or tristimulus values may be obtained by a direct reading micrometer-controlled optical slit comparing the sample to a white standard.

The Color Eye is substantially unaffected by illumination level and stray light. Color comparison is made on a basis of luminosity and direct tristimulus measurements. Colors thus matched are industrially satisfactory regardless of the detailed spectrophotometric color curve of the samples. The Color Eye, adaptable to innumerable industrial applications, will be marketed by the Instrument Development Laboratories, Inc., Williston Park, Long Island, N. Y.

Xylotechnographica was the term used by England in 1875 to describe the process of dyeing wool into various colors.

Textile Exhibit Prize Winner At Ga. Tech

The Textile Engineering Department was awarded first prize for the best exhibit at Georgia Tech's annual Engineers Day celebration, April 17. The prize winning exhibit, which traced the course of cotton from the bale to the finished fabric, was designed by members of Phi Psi, honorary textile fraternity. This group of students headed by Bob Horsley, Opelika, Ala., president of the fraternity, included: Frank Williams, West Point, Ga.; Bob Amsler, Decatur, Ga.; Lewis Shackleford, Carrollton, Ga.; Ed Stall, Greenville, S. C.; Bert Stumberg, Tallassee, Ala.; Harry Hardy, Cheyenne, Wyo.; Bill Lippman, Toledo, Ohio; and Frank Kelly, Fairfax, Ala.

April Rayon Shipments Decline Slightly

April shipments of rayon yarn and staple amounted to 89,500,000 pounds, slightly below March deliveries but 14 per cent above those of April, 1947, according to the May *Rayon Organon,* statistical bulletin of the Textile Economics Bureau, Inc. Total shipments in the first four months of 1948 totaled 352,700,000 pounds, a 16 per cent increase over the corresponding figure last year.

Shipments of filament yarn in April amounted to 67,200,000 pounds, 12 per cent more than in April, 1947. By yarn types, 44,600,000 pounds were viscose+cupra and 22,600,000 pounds were acetate. Rayon staple and tow shipments in April totaled 22,300,000 pounds, 22 per cent more than the corresponding month last year. Viscose staple amounted to 14,900,000 pounds and acetate staple 7,400,000 pounds. Aggregate shipments of staple in the first four months of the year amounted to 88,300,000 pounds, 37 per cent more than a year ago. Filament yarn stocks in the hands of producers at the end of April amounted to 9,100,000 pounds, while staple and tow stocks were 3,600,000 pounds.

Rayon staple imports for the first two months of this year were 45 per cent under those in the same period a year ago. On the other hand filament yarn imports increased appreciably. A total of 1,681,000 pounds of filament yarn were imported for consumption in the first two months of 1948, six times the imports for the entire year of 1947 and greater than any annual total since 1931. So far this year, the principal suppliers of filament yarn to the United States have been Italy with 44 per cent of the total, Germany 23 per cent, France 16 per cent and the Netherlands ten per cent. Smaller suppliers included the United Kingdom, Switzerland, Canada, Mexico, Japan and Chile.

Rayon staple imports for consumption in the first two months amounted to 5,601,000 pounds as against 10,096,000 pounds in the corresponding period last year. February shipments amounted to 3,487,000 pounds, 19 per cent less than in the same month last year. February saw a considerable increase in staple receipts from Belgium and France. There was a moderate increase in imports from Holland, while Switzerland again came into the picture in a small measure. Staple receipts from the United Kingdom were less than half of the January figure, while those from Norway likewise declined.

Owing to an increase in the domestic supply of rayon staple, total shipments (domestic and foreign) for consumption in the United States during the first quarter were larger than in the corresponding period last year. Imported

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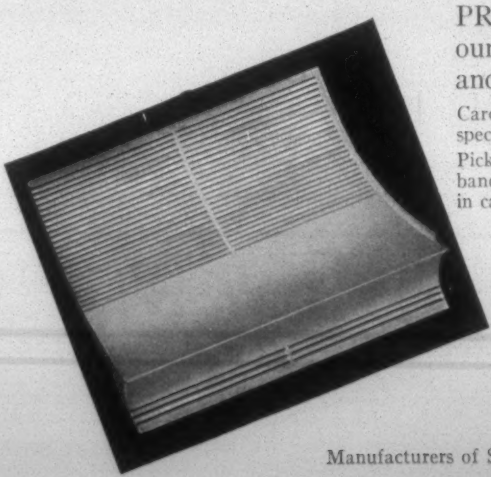

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Card Screens . . Perforated or ribbed types, precision built to standard specifications.

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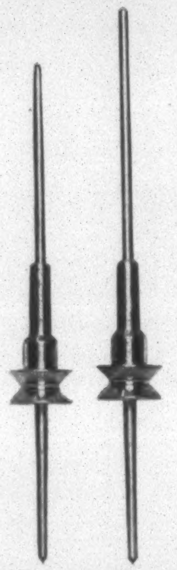

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staple constituted 12 per cent of the total available supply this year as against 24 per cent last year.

The *Organon's* analysis of domestic output of all types of rayon in the first quarter of the year reveals the advance to new record levels of production. Output in the first three months amounting to 268,300,000 pounds was 16 per cent higher than a year ago and three per cent higher than the preceding quarter. This represents the seventh consecutive quarter that the industry has established a new quarterly output record.

If the first quarter 1948 output is maintained for the balance of the year, an annual production of well over 1,000,000,000 pounds is in prospect. The billion-pound figure takes on added meaning, the *Organon* points out, when it is realized that only seven years ago, the industry was producing only one-half the current rate.

In the first quarter of 1948, peak production levels were achieved by both the viscose+cupra filament yarn and viscose staple and tow amounting to 181,700,000 pounds was one per cent above the previous high rate attained in the fourth quarter of 1947. Acetate filament yarn and staple output at 86,600,000 pounds was eight per cent above the previous record.

Rayon filament yarn production in the first quarter, totaling 200,800,000 pounds was three per cent above the fourth quarter and ten per cent above the first quarter of 1947. The acetate division of the industry showed the greatest relative as well as actual increase during the first quarter of 1948.

First quarter production of rayon staple and tow amounting to 67,500,000 pounds also set a new record. It represents an increase of four per cent over the fourth quarter of 1947 and 39 per cent above a year ago. The record was made possible by the increased acetate output, which was 67 per cent greater than a year ago.

Domestic filament yarn shipments during the first quarter to principal consuming trades, other than tire manufacturers, showed the following percentage changes compared to the fourth quarter of 1947: full-fashioned hosiery, plus 131 per cent; seamless hosiery, plus nine per cent; circular knitting, plus two per cent; warp knitting, plus seven per cent; broad and narrow weaving, plus six per cent each; and miscellaneous uses, plus five per cent. While shipments to fashioned hosiery showed a large percentage increase, the actual poundage shipped was small. First quarter yarn shipments to tire manufacturers were slightly below the fourth quarter level but three per cent above the January-March period last year.

Exports of filament yarn by rayon producers in the first quarter of the year totaled 4,400,000 pounds, seven per cent under fourth quarter 1947 exports but 24 per cent greater than first quarter exports a year ago. These exports constituted two per cent of the total first quarter yarn shipments to domestic producers.

Group Airs Industrial Relations Problems

Approximately 150 delegates from the Piedmont section of North Carolina and Virginia were in attendance at the Piedmont Industrial Relations Conference held April 20-21 at Winston-Salem, N. C. Principal speakers heard during the conference were Ira Mosher of New York, industrial relations counselor and a former president of the National Association of Manufacturers; Richard L. Siegel, public relations representative of the International Harvester Co. of Chicago; Frank A. Constangy, labor relations specialist of Atlanta; and J. D. MacLaughlen, Jr.

Mr. Mosher told the delegates that the economic battle to preserve freedom and democracy can be won only with the co-operation of all Americans. "The future," he said, "depends on peace between labor and management, and that peace will never come until we dispel the darkness enveloping the economic facts of our free competitive system of enterprise." Considering "Public and Community Relations," Mr. Siegel declared "you get out of a community just what you put in," adding that business today needs "public relations and all of its tools desperately."

Mr. Constangy cited the impact of a new decision by the N. L. R. B. on the Inland steel case, which held that the company pension and retirement plans were subject to collective bargaining.

"This decision," he said, "creates a whole new area of conflict that will have the tendency to set back the progress that has been made in the last several years on company pension and retirement plans." The concluding speaker, Mr. MacLaughlen, spoke on "The Importance of an Adequate Industrial Safety Program." He said that "The fallacy on the part of most safety engineers, both in the past and today, is that of limiting accident prevention work to workers only." To be effective, he said, the safety program must be extended to materials and machines also to provide a dollar savings.

Fifty-five miles of nylon cord are used in the construction of a Goodrich 56-inch airplane tire.

Carolinas-Virginia Purchasing Agents Meet

The Carolinas-Virginia Purchasing Agents Association, with many representatives of the textile industry in attendance, met recently at Southern Pines, N. C., in the first of four sessions scheduled this year, other meetings to be held later at Asheville, Greensboro and Charlotte, N. C. J. M. Geer of Fieldcrest Mills, Spray, N. C., presided over the concluding session of the parley. Officers of the association are R. A. McCuiston of Thomasville, N. C., president; Tucker McCravy of Pacific Mills, Lyman, S. C., vice-president; and J. E. Doxey of Duke University, Durham, N. C., secretary-treasurer.

A. C. M. A. '49 Parley At Palm Beach

Harvey W. Moore of Charlotte, N. C., chairman of the board of the American Cotton Manufacturers Association, announced May 20 that the 1949 convention of the association would be held in Palm Beach, Fla., March 31, April 1 and 2. Mr. Moore indicated that the convention hotel would be the Palm Beach Biltmore, which is described as the largest hotel south of Washington, D. C. He expressed particular pleasure over the fact that practically all the members and their guests could thus be accommodated in one hotel.

This will be the 53rd annual meeting of the association, but the first time the organization has ever convened in Florida. Association officials indicated that before Palm Beach was selected for the 1949 meeting, convention hotels were considered at Miami Beach, Boca Raton and Hollywood, Fla., and at Augusta, Ga., Pinehurst, N. C., French

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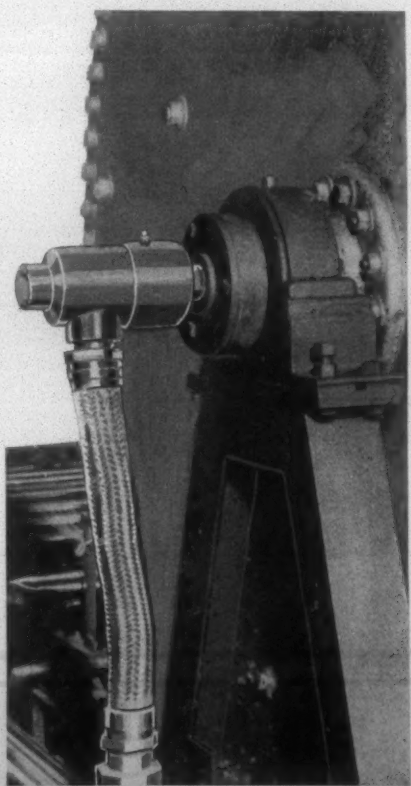

Lick, Ind., White Sulphur Springs, W. Va., Homestead, Va., Memphis, Tenn., Biloxi, Miss., and Atlantic City.

Possibilities for chartering a boat upon which the meeting might be held were also considered, but such plans were found to be impracticable due to the large number of persons to be accommodated. The association includes in its membership approximately 85 per cent of the spindles in the South and approximately 67 per cent of those in the United States. Attendance at its 1948 meeting, which was held last month in New Orleans, came to 775 people.

Textile Industry Awaits E. C. A. Demands

An air of "restrained impatience" is reported among New England Textile machinery manufacturers as they consider potential demands on their industry as a result of the Economic Co-operation Administration program for the rehabilitation of European industries. The general opinion among top executives is that "It's still too early to tell exactly what E. C. A. will mean to the textile machinery plants in New England, but we are certain that Europe needs our products." Meanwhile business is being carried on in a day-to-day routine limited by a moderate domestic demand which has stabilized sharply below 1946 and 1947 levels and by a rapidly diminishing dollar exchange abroad.

Paul G. Hoffman, E. C. A. administrator, reveals that E. C. A. commodity obligations now include $14,500,000 worth of wool, plus $2,700,000 worth of cotton yarn; $72,200,000 for cotton cloth; $89,100,000 for hides, skins and leather; $2,100,00 for rubber; $131,900,000 for fats and oils, and additional large sums for various metals. Commission house executives in New York's Worth Street expressed interest in the announcement concerning the sum provided for the purchase of cotton cloth, but expressed the opinion that it was not large enough to affect the market drastically.

Mr. Hoffman disclosed recently that $511,300,000 worth of cotton would be sent to European countries through the E. C. A. with Great Britain, France and Italy being the largest benefactors. Of $36,500,000 recently appropriated for aid to China, $13,000,000 will be for cotton, it is reported. In the meanwhile a bill is pending in Congress which would create a $150 million revolving fund to finance the purchase of American cotton for Japanese textile mills. The bill would assure the export of 850,000 bales of cotton next year. The government-owned Export-Import Bank recently announced that it will join three private banks in making a $60,000,000 loan to finance shipment of American cotton to Japan.

The American cotton textile delegation, recently returned from conferences in England, reports that American and British cotton textile interests stand to enjoy a long period of prosperity in world export markets, and that both sides are in accord in their thinking on world problems. American mills, with their machinery geared for the most part on mass production, and British mills, concentrating on specialty cloths, can both serve world trade, the delegates pointed out.

School Holds Institute On Mill Maintenance

Representatives from 30 textile plants were among the 172 persons registered for the institute on "Mill Maintenance" held April 21-22 at the North Carolina Vocational Textile School at Belmont, N. C.

Subjects discussed on the first day of the institute were "Maintenance of Electrical Equipment in Industrial Plants," by Robert Posey of Westinghouse Electric Corp., Atlanta, Ga.; and "Proper Lighting in Industrial Plants" by Roy A. Palmer, Duke Power Co., Charlotte, N. C. Mr. Posey stressed the importance of maintaining electric motors and controls and keeping maintenance records. As most plants have small motors and control, he said, it is essential that motors be cleaned regularly of dirt and moisture, the two principal enemies of electrical equipment. Mr. Palmer spoke of the need for proper and adequate light in mills

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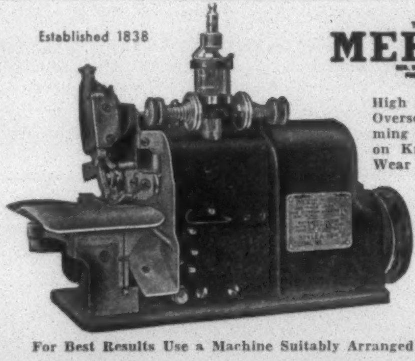

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from the standpoint of production and safety as well as comfort of employees. The proper color of paint in a room, he pointed out, will double illumination and as dirt and dust will absorb 20 to 30 per cent of the light, it is important that fixtures be kept clean.

The concluding session of the institute considered "Fire Hazards and Fire Prevention" with the speakers being John P. Hamilton of Associated Factory Mutual Fire Insurance Companies, Charlotte, and Asa Hosmer of Factory Insurance Association, Charlotte. Mr. Hamilton declared that a relative humidity of 60 per cent or more tends to slow the burning process of cotton fibers and for the best fire protection, the humidity should be kept as near as possible to the upper limits of the permissable workable range. Mr. Hosmer listed the causes and prevention of fires in cotton mills as a result of maintenance and electrical installations.

Textile Foundation Board Re-Elects Hobbs

Franklin P. Hobbs, chairman of William Whitman Co., New York, has been re-elected for the 19th time to serve as chairman of the board of directors of the Textile Foundation. Mr. Hobbs was re-elected at the annual meeting of the foundation held April 21 at the Commerce Department in Washington. Other members of the board present were Frank D. Cheney of Cheney Bros. and Donald Comer of Avondale Mills, Sylacauga, Ala.

It is understood the Textile Foundation, which is in the process of liquidation, still has almost half a million dollars left to allocate for research, which is expected to take four or five more years.

Discuss Standards For International Trade

A delegation of American authorities on standards and testing in the textile industry have been invited to attend the annual meeting, June 2, of the British Textile Institute, to be held at Buxton, England. The purpose is to discuss standards for international trade for all phases of the industry. The delegation will be under the leadership of D. E. Douty, chairman of the board of directors, United States Testing Co., who was elected as chairman of the United States delegation at a meeting held in New York recently. While the meeting is not directly connected with the Economic Co-operation Administration, the setting up of international codes of procedure governing tests of materials will, it is said, have an important bearing on qualities of import and export textiles.

The Buxton meeting will be addressed by Harold Wilson, president of the British Board of Trade, and will be attended by representatives of all the countries in the Western European zone and possibly others from Eastern Europe.

The fact that the textile institute's meeting was arranged for the week prior to the meeting of the International Organization for Standardization's (I. S. O.) project on textiles, June 7, opened the way for the inclusion of the United States experts. Committee No. 38 of the I. S. O.'s project on textiles will have two important items in its agenda: international definition for rayon and the determination of what country shall have the secretariat of the project.

The delegation will include: Wm. D. Appel, chief of textile section, National Bureau of Standards; Prof. H. J. Ball, Lowell (Mass.) Textile Institute, chairman of Committee D-13 of A. S. T. M.; J. Robert Bonnar, technical director, General Dyestuff Corp. and chairman of research

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committee, A. A. T. C. C.; Dr. Carl M. Conrad, chemist, Southern Regional Research Laboratory, U. S. Department of Agriculture; D. E. Douty, chairman of the board, United States Testing Co., Inc.; J. B. Goldberg, director of research, J. P. Stevens & Co., Inc.; Admiral Geo. F. Hussey, U.S.N. (Ret.), secretary, American Standards Association; E. T. Pickard, secretary, The Textile Foundation; A. G. Scroggie, supervisor of rayon analytical research laboratory, E. I. du Pont de Nemours & Co., Inc.; Dr. D. L. Worf, director of naval research, U. S. Navy.

Electricity Held Aid To Weaving, Slashing

Textile manufacturers and machinery designers were told of new ways to increase efficiency in weaving and slashing by use of electricity at the Northeast District meeting of the American Institute of Electrical Engineers in New Haven, Conn., April 28. Speakers on methods of driving looms were Victor F. Sepavich, Crompton & Knowles Loom Works, Woscester, Mass., and R. J. Demartini, General Electric Co., Schnectady, N. Y. Frank J. Rowe, Jr., Dan River Mills, Inc., Danville, Va.; Paul Wenzel, Bachmann-Uxbridge Worsted Corp., Uxbridge, Mass.; and C. E. Center, Westinghouse Electric Corp., Boston, spoke on slasher speeds and motors.

Mr. Rowe said weave room efficiency and better cloth were sure to follow the use of new type AC-DC drives now being used on the slashers in advanced mills. Summing up some of the problems in driving looms, Mr. Sepavich pointed out that looms for differing takes required different means for making them go. These problems are: (1) Instant starting so maximum velocity may be imparted to the shuttle on its first travel across the loom. (2) Instant acceleration of the looms properly to place the first pick in the fabric. (3) Instant stopping of the loom in case the shuttle is trapped within the shep. (4) Steady and unfailing supply of power to carry the loom over the peak loads encountered in normal operation. (5) Easy accessibility to inching action which takes place while different adjustments, settings or alterations are being made upon the loom.

Mr. Demartini told the group that a new line of loom motors has been developed after mathematical analysis of the jobs these motors must do, and outlined a method for calculating requirements needed to drive the ordinary loom. Speaking on slasher design and operation, Mr. Wenzel said one slasher can produce enough warps to take care of the requirements of from 200 to 500 looms. "The slasher, more than any other machine in a textile mill, must give continuous production with a minimum of breakdown or maintenance," he said.

Because more elaborate electrical and electronic drives and controls are being used to a greater extent in the textile industry, executives must seek better trained electricians to maintain equipment, Mr. Center warned. Reporting on a survey of drives for slashers, Mr. Center said manufacturers are continually trying to produce better drives. These, he added, help the operator to have better and more flexible control over his machine and permit the mills to make better warps and better cloth.

Manufacturing Methods Surveyed By QM

A survey report of manufacturing methods used by the worsted industry in making olive drab serge cloth for Army clothes, conducted by the Office of the Quartermaster General, U. S. Army, is now on sale by the Office of Technical Services. The report was prepared by William B. Williamson for the Research and Development Branch of the Office of Quartermaster General, U. S. Army. The survey was conducted to find the causative factors in deviations from specifications of cloth delivered to the Army by different firms. From the standpoint of the industry and the Quartermaster Corps a higher degree of uniformity would be desirable, the report explains, since significant variations result in higher manufacturing costs and greater expense to the government.

A thorough study of detailed steps in processing worsted serge was made at 43 mills representing a fair cross-section of the entire industry. Among the general conclusions formed are the following:

Three basic factors preclude recommending the adoption of some manufacturing procedures and methods as preferable to others. First, plant equipment is not standard. No two mills were found with identical machines. Second, some mills are completely integrated, others are not. The plant that only weaves and finishes the cloth has different problems from the plant that completely processes the raw wool to the finished cloth. The integrated mill has more positive control over yarn weights, twist shade, and such factors. Third, the geographical location of a mill is an important factor since water hardness and natural humidity vary widely with locale and require different manufacturing methods.

Even with these variables, however, manufacturers can,

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to their advantage, compare methods to determine whether manufacturing techniques conform to the general average, the report states.

For example, percentages of white used in blending light shade serge varied from 22 to 30 per cent and averaged 27 per cent. In the dark shade the percentage varied from 20 to 25 per cent and averaged 23 per cent. This suggests that in those plants using the smallest percentages of white in the blend, a small increase in the proportion of white would reduce the necessary quantity of top to dye by this amount. This would result in a small saving in the cost of dyeing and alleviate possible bottlenecks due to insufficient dyeing capacity.

Excessive sponging shrinkage results when the fabric has been excessively stretched out in length. Most of the shrinking occurs during dry finishing. Since the allowable sponging shrinkage on serge is four per cent, the pull-out should never exceed this figure. Tension on the cloth during shearing, pressing and decating, must, therefore, be very limited. The average head shrinkage from trapping in the mills studied was nine per cent, and the average final net shrinkage was 5.3 per cent, making the average pull out 3.7 per cent. Similar observations are made in the report on wool sorting, raw wool scouring and drying, carding, first and second gilling, combing, gilling after combing, top-dyeing, back washing, recombing, drawing and spinning, warp dressing and weaving, weaving, wet finishing and dry finishing. Twenty-five tables and graphs are included in the report.

Mimeographed copies of the report (PB-86251, *Survey of Various Manufacturing Methods in Use by Worsted Industry for Production of Cloth, Serge, O. D.;* 40 pages) sell for $1.75. Orders should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order payable to the Treasurer of the United States.

British Cotton Chief Wants Normal Trade

H. O. R. Hindley, chief of the British Raw Cotton Commission who is currently on a tour of American cotton centers, last month told a group of Memphis, Tenn., cotton men that as head of the British commission he would "like to preserve the possibility of dealing through normal channels of business."

The British visitor expressed the opinion that the Liverpool Cotton Exchange could not open at the present time because of the money exchange difficulties, even should there be no political or other reasons for it remaining closed.

Admitting that the commission is under considerable pressure to insure that the exchange never reopens and that buying agencies be established in the United States and in India as they are in Egypt and Brazil, he added that equal pressure is being brought on the other side to return to the old methods of buying and to reopen the exchange.

Questioned as to the possibility of opening a buying agency in America he commented that he was "sure there would be great resentment here against establishment of a buying agency."

Here is a significant fact for the statistically-minded. The textile industry now employs 38 per cent of all the nation's industrial workers, reports the New York *Journal of Commerce.*

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Broad Woven Output Highest Since '43

A total of 9,809 million yards of cotton broad woven fabrics was produced in 1947, according to the Bureau of the Census, Department of Commerce. This is the largest annual production reported since 1943 when 10,573 million yards were produced. Tire cord and fabric production amounted to 576 million pounds, the largest annual production reported since this series began in 1942.

These statistics were compiled by the Bureau of the Census, industry division, from reports filed by manufacturers primarily engaged in weaving fabrics over 12 inches in width of cotton, silk, rayon and other synthetic fiber yarns. All such manufacturers were canvassed and estimates have been made for those whose reports were not received. Figures for 1947, based on quarterly surveys conducted by the Bureau of the Census, are preliminary. Final figures will be published as a part of the Census of Manufactures for 1947, which is now being taken.

Comparative Summary of Production by Class of Fabrics

Type of Goods	1947	1946	Pct. Change 1947 from 1946
	(In millions of linear yards)		
COTTON BROAD WOVEN GOODS (except tire fabrics) TOTAL	9,808	9,144	+ 7
Cotton duck	212	241	—12
Narrow sheetings and allied coarse—and medium-yarn fabrics	2,353	2,232	+ 5
Print cloth yarn fabrics	3,250	2,883	+13
Colored-yarn cotton goods and related fabrics	726	616	+18
Wide cotton fabrics	646	562	+15
Fine cotton goods	1,316	1,275	+ 3
Napped fabrics	509	455	+12
Towels, towelings, and wash cloths	408	414	— 2
Specialties and all other fabrics	385	461	—17
	(In millions of pounds)		
TIRE CORD AND FABRIC, TOTAL	575	524	+10
Cotton tire cord and fabrics	345	311	+11
Rayon and nylon tire cords and fabrics	229	213	+ 8

Pepperell Sales Chief Is Optimistic

"We have by no means saturated our American markets for cotton, rayon and blended fabrics," says Donald B. Tansill, vice-president in charge of sales, Pepperell Mfg. Co., in a bulletin just issued to salesmen of his company. Tansill also said that he looks for a good Fall and Winter business in the trade. The price structure has been firmed, he added, and some needed corrections have taken place in out-of-line cotton and rayon goods prices.

Mr. Tansill further stated that recent national and international events have wrought a change in consumer sentiment which has been definitely felt in the past few weeks

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at the retail counter. He pointed to the Economic Co-operation Administration, to Russian aggression which has stepped up both our stock-piling and armament appropriations and to the reduction in income taxes as prominent factors in the change of sentiment. However, he does not feel that rapidly advancing or run-away prices will come as a result. Instead, the effect to date has been to firm up existing quotations.

The manufacturers best fitted to make the most of present opportunities for good business, in Tansill's opinion, are those who can reduce costs without sacrifice of quality, who offer good styling and who will combine hard selling with aggressive advertising and promotion.

Some other highlights of the Tansill statement are as follows: "In reviewing the background of cotton goods and rayon yarn production, we cannot overemphasize production potentials. Our high point nationally in cotton spindles was reached in 1925 when there were 38 million spindles in place. At present there are 22 million spindles, but 500,000 never seem to run. In the eight pre-war years, average annual production of cotton goods was 8½ billion square yards. Last year we made 11 billion square yards. (An increase of nearly 30 per cent over the pre-war average.) In the same eight pre-war years we exported only 250 million square yards of cotton goods annually. Last year they nearly reached 1½ billion square yards.

"Our population has increased 13 millions since 1939. After deducting shipments abroad, we supplied American consumers with exactly the same per capita yardage we gave our much poorer and smaller population in 1939. It is plainly apparent that we have not saturated our markets."

Spinning Activity Figures For April

Based on preliminary figures, 23,807,000 cotton system spinning spindles were in place in the United States on April 30. As of the last working day of the month, 21,694,000 were consuming cotton; 1,348,000 were consuming other than cotton, and 765,000 were reported idle.

The total cotton system spinning spindle hours reported for April amounted to 11,318 million, an average of 475 hours per spindle. For March, the total was 11,684 million, an average of 492 hours per spindle.

During April, cotton system spinning spindles operated at 136.1 per cent of capacity based on an 80-hour week, compared with 133.6 per cent for March.

The Census Bureau has reported that lint cotton consumed during April totaled 829,730 bales. This compares

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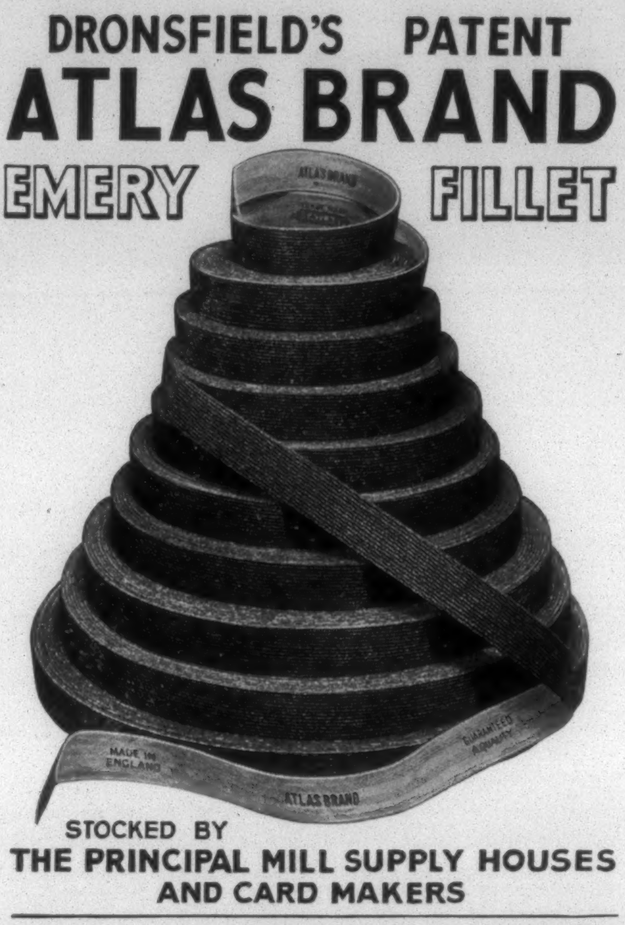

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with 878,714 bales consumed during March of this year, and 882,390 bales consumed during April of last year.

Consumption for the nine months ending April 30 totaled 7,131,046 bales, compared with 7,810,484 for the corresponding period a year ago.

Cotton on hand April 30 included: in consuming establishments, 2,195,881 bales compared with 2,504,402 a year ago; in public storage and at compresses, 2.860,277 bales compared with 2,117,197 a year ago.

The Agriculture Department, in a revised report this month, estimated the 1947 cotton crop at 11,551,000 bales of 500 pounds gross weight.

This was an increase of 157,000 bales over the department's last previous estimate made last December.

The revision was based on cotton ginnings for the season, as reported by the Census Bureau.

The crop was 3,200,000 bales more than the small 1946 crop but 539,000 bales less than the 1936-45 average.

The department said the combined value of cotton and cottonseed on the 1947 crop was $2,291,202,000—the second highest on record. It was exceeded only by the 1919 crop which was 2.5 per cent higher in value.

Calculated at the season's average price of cotton sold to May 1 this year, the value of the crop of lint was $1,889,465,000. This is 34 per cent above the previous season.

Du Pont Owned By 93,423 Stockholders

E. I. du Pont de Nemours & Co., Inc., was owned by 93,423 different stockholders as of March 31, an increase of 2,222 over the number of holders recorded at the close of the last quarter of 1947 and an increase of 5,649 over the number of holders as of March 31, 1947.

There were 76,002 holders of common stock and 23,450 holders of preferred stock as the first quarter of 1948 ended. These figures include 6,029 holders of more than one kind of stock. More than 43,900 holders were women, and every state in the Union was represented among Du Pont stockholders.

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Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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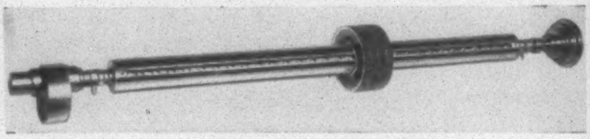

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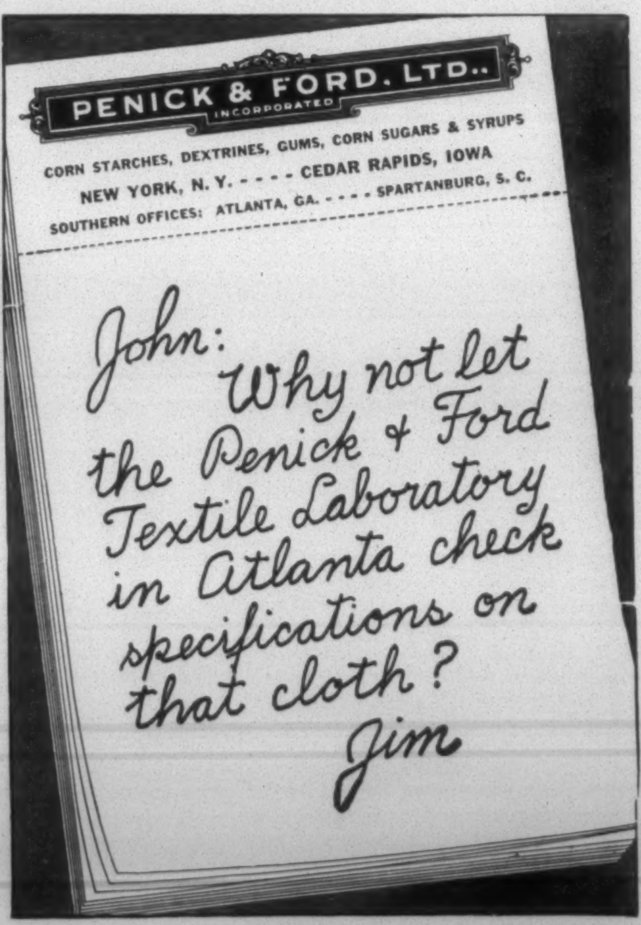

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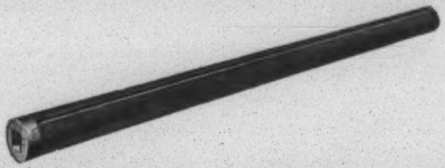

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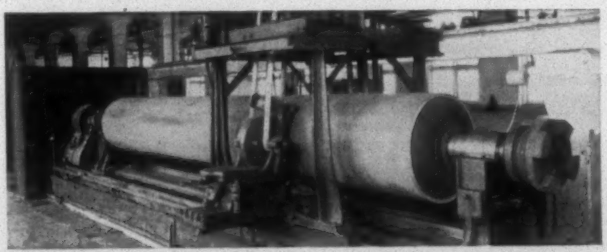

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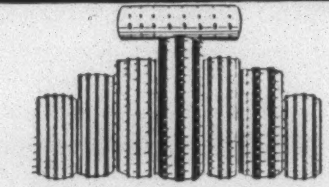

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WANTED—Position as Superintendent of Sewing Room, or a General Overseer of same in textile plant. References. Write "Sewing," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as Overseer of Carding and Spinning. 35 years' experience and can furnish excellent references as to character and ability. Now employed, but desire change. Write "L. L.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION wanted as Superintendent of Carded Yarn or Combed Yarn Mill, or plain weaving mill. 24 years' experience; best of references. Reply to "A.O.A.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

FOR SALE

Two oiling attachments for 101 Foster Winder for sale. New, have not been taken from factory boxes. A-1 condition. Two Foster Doublers for sale, A-1 condition. Can be seen on mill floor.

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Thoroughly experienced in control testing and in mill control. Also thoroughly experienced in Quality Control by Statistical Methods. Several years' experience. Now employed; desire change.

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Man capable of supervising corduroy finishing operation on men's wear fabrics. Must know cutting and finishing and be able to train operators. Excellent opportunity. Southern location. All replies will be held in confidence and acknowledged. Our employees know of this advertisement. Reply to

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Man for employment in training department of large Southern textile mill.

Must have textile experience and preferably teaching experience. Housing available.

Excellent opportunity for right man.

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An Industrial Engineer who understands job load, evaluations, time study and internal cost for a cotton mill in the Piedmont Section of North Carolina.

Write "Engineer," care Textile Bulletin
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MEN WANTED—POSITIONS OPEN: We can place superintendents for cotton mills in the South, India and South America; assistant mill manager rayon fabrics $6,000-$8,000; superintendent bleaching, dyeing and mercerizing plant, South America; assistant training director; designer for jacquard and dobby fabrics; overseer cotton weaving, 2nd shift; assistant overseer cotton carding and assistant overseer cotton spinning; two instructors or teachers in textile schools; foreman corduroy finishing; rayon-cotton dyers and finishers; master mechanic 10,000 spindle cotton mill; chemists and laboratory men; loom fixers for South America; hosiery machine fixers; sewing machine fixers.

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Fowler's Nursery, Fayetteville Road,
Raleigh, N. C.

WANTED

Competent Overseer of Weaving for sheeting mill of about five hundred looms, located in the best section of Georgia. Please give age and experience, with references and salary desired, in letter of application.

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- Firms having textile mill equipment for sale also find Textile Bulletin classified advertisements valuable in establishing business contacts.

WANTED

Assistant Overseer of Carding,
large Alabama mill.

Reply to "Alabama," care Textile Bulletin,
P. O. Box 1225, Charlotte 1, N. C.

WANTED

Assistant Overseer of Spinning,
large Alabama mill.

Reply to "M. C. D.," care Textile Bulletin,
P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED

Textile graduate of cotton carding and spinning, desires position as overseer of carding or second hand. Now employed but desire change. Can furnish good references.

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Commission salesman covering Georgia and Alabama to handle an old line leather belting account.

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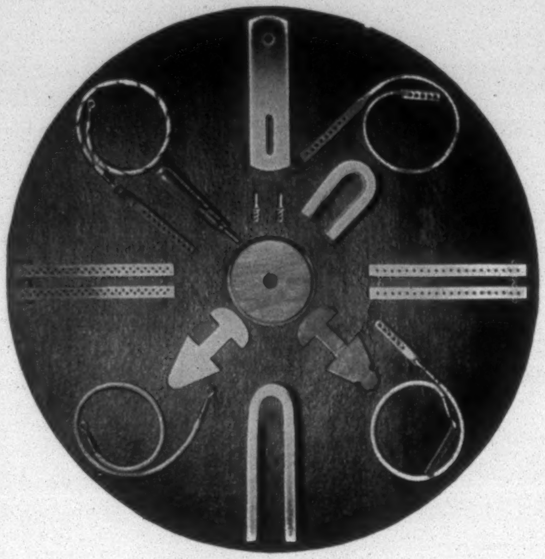

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Before Closing Down

– TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED –

MILL NEWS

Goldville, S. C.—A petition is being circulated in Goldville asking the United States Post Office Department to change the community's name to Joanna Town. Goldville is the site of Joanna Cotton Mills Co., which markets its finished cloth production under the trade name "Joanna Fabric."

Gonzales, Tex.—The third shift has been eliminated at Gonzales Cotton Mills, according to A. G. Ainsworth, president. About 275 workers have been retained for production of osnaburgs.

Hartwell, Ga. — Daniel Construction Co. has been awarded the contract for construction of the new $3,000,000 rayon weaving plant of Textron Southern, Inc.

Boiling Springs, N. C.—David Sobel and associates of New York City have sold the Boiling Springs Mill to James R. Riley and Robert R. Spilman. The plant is equipped with approximately 3,000 spindles, production yarn of medium counts. Mr. Riley is president and treasurer of Kings Mountain (N. C.) Narrow Fabrics, Inc., and Mr. Spilman is a resident of Monroe, N. C.

Front Royal, Va.—The Virginia State Water Control Board, in unprecedented action this month, ordered American Viscose Corp. to clarify and neutralize completely the waste water from its Front Royal plant. The corporation was ordered to install waste treatment equipment by March 31, 1949.

New York, N. Y.—Directors of Reeves Bros., Inc., at a meeting May 17 declared a dividend of 25 cents per share on the common stock, and an extra dividend of 25 cents, both payable July 1 to stockholders of record June 3.

Sweetwater, Tenn. — Both plants of American Textile Woolen Co. are being disposed of by the present owners. It is understood that the plant at Athens, Tenn., containing 5,600 wool spindles and 42 looms, already has been sold. The Sweetwater unit contains 160,000 square feet of floor space, 3,700 spindles, 64 looms and adequate complementary machinery.

Charlotte, N. C. — Plans to erect a $100,000 building to house the general offices of the Kendall Co. cotton mills division have been announced by H. K. Hallette, general manager. The structure, plans for which are being drawn by J. N. Pease & Co., will be located at 521 East Morehead Street. Office space will be included for the accounting, payroll, purchasing, engineering, planning and personnel departments. The Southern executive offices of the Kendall Co. were first established in 1928 at Paw Creek, N. C., where it has been located since then. Cotton purchasing offices are maintained at Newberry, S. C., and research offices and laboratory facilities will continue to be located at Paw Creek, according to Mr. Hallett.

Greenville, S. C.—Bids were due May 27 on a one-story, 90 by 210-foot warehouse to be erected for the Greenville plant of Woodside Mills. J. E. Sirrine Co. is engineering the project.

Charlotte, N. C.—Spatex Corp., incorporated in Delaware, has purchased the Hoskins Plant of Textron Southern, Inc. President of the purchasing firm is Robert L. Gilman of New York City, also head of Profile Cotton Mills at Jacksonville, Ala. Textron will retain possession of the plant, which contains 580 looms and 29,312 spindles, until September. Production of combed lawns and boardcloths will be continued following an improvement and modernization program.

Rock Hill, S. C.—Bids were to be received May 25 on a proposed addition to the plant of Arcade Cotton Mills. J. E. Sirrine Co. of Greenville, S. C., is in charge of engineering.

Landis, N. C.—A $750,000 modernization and expansion program has been made known by P. K. Dry, superintendent of Linn Mills Co., Inc., and Corriher Mills Co., Inc. The program calls for the replacement of about $550,000 worth of mill machinery, two additions to the Corriher plant, an addition to the Linn plant, and the construction of a general mill office, he stated. In addition to replacing many of the old spinning frames, the company also plans to add 3,000 to 5,000 spindles. Space will be provided for as many as 8,000 additional spindles.

Monroe, N. C. — Decision has been reached by officials of Bloom Mills, Inc., of New York City, to open a second plant here. The company has let a contract to R. T. Murray, local contractor, for the remodeling of a large building here, to be ready for occupancy about the first of June. Bloom Mills' first plant, to be located in the Camp Sutton area, will have approximately 5,000 spindles and 65 looms in initial operations for the manufacture of broadcloth from Egyptian cotton. Work has been progressing on the first mill and limited production is under way.

Pelzer, S. C. — A fluorescent lighting system and a new humidifying system have been installed throughout the upper plant of Pelzer Mills, a subsidiary of the Kendall Co. In addition, completely new Saco-Lowell spinning is being installed.

PERSONAL NEWS

Edwin D. White, formerly assistant to the Secretary of Agriculture, has been named cotton specialist for the Economic Co-operative Administration.

E. J. Gernt, manager of Luray (Va.) Textile Corp., has been elected president of the Luray Chamber of Commerce.

D. M. Cline, formerly associated with Shuford Mills at Hickory, N. C., has been named manager of Patterson (N. C.) Mills, Inc. He succeeds J. Ralph Ritchie.

William J. Plaskon of Dublin, Ga., has been awarded the medal presented annually by the American Cotton Manufacturers Association to the highest ranking senior in the A. French Textile School, Georgia School of Technology, Atlanta. The Cotton Manufacturers Association of Georgia medal was awarded to William D. Lippman of Toledo, Ohio, as the best all-round textile school student.

C. L. Targgart, formerly of Pelzer, S. C., has been transferred to the Wateree Plant of the Kendall Co. cotton mills division at Camden, S. C., as manager; he succeeds J. C. Ewing, now manager of the Thrift Plant at Paw Creek, N. C. . . . L. H. Jordan is now manager of the Addison Plant at Edgefield, S. C.; he replaces Karl A. Gelpke, now assistant works manager of the division, with headquarters at Paw Creek. . . . G. W. McCall has been promoted from overseer of weaving at the Pelzer Mills upper plant to superintendent of the lower plant; E. P. Thomas of Arcadia, S. C., has been named overseer of weaving at the upper plant. . . . J. A. Trayham has been promoted from assistant overseer to overseer of the cloth room in the Pelzer lower plant.

OBITUARIES

Harry Lee Cornelius, Sr., 59, retired general purchasing agent for Celanese Corp. of America, died recently at Cumberland, Md., after an illness of ten months. Surviving are his widow, two sons, two daughters and five grandchildren.

John E. Fullagar, 67, retired secretary of Union-Buffalo Mills Co. at Union, S. C., died this month at his home in Rochelle Park, N. J. He was associated with Union-Buffalo for 39 years. Surviving are his widow, two daughters, a son and a sister.

William A. McCanless, 67, president of Halifax Cotton Mills at South Boston, Va., died May 21 in a Salisbury, N. C., hospital. He is survived by two sons, two daughters, three brothers, three sisters and six grandchildren.

William Harold Gibson, Jr., 60, prominent retired textile executive, died May 21 at Gastonia, N. C. He was a former superintendent of Martha Mills at Thomaston, Ga., and organized Gibson Yarn & Weave Mills at Dallas, N. C., before his recent retirement. He was president of the Southern Textile Association during 1926-27. Survivors include his wife, a son, a daughter, a sister and two brothers.

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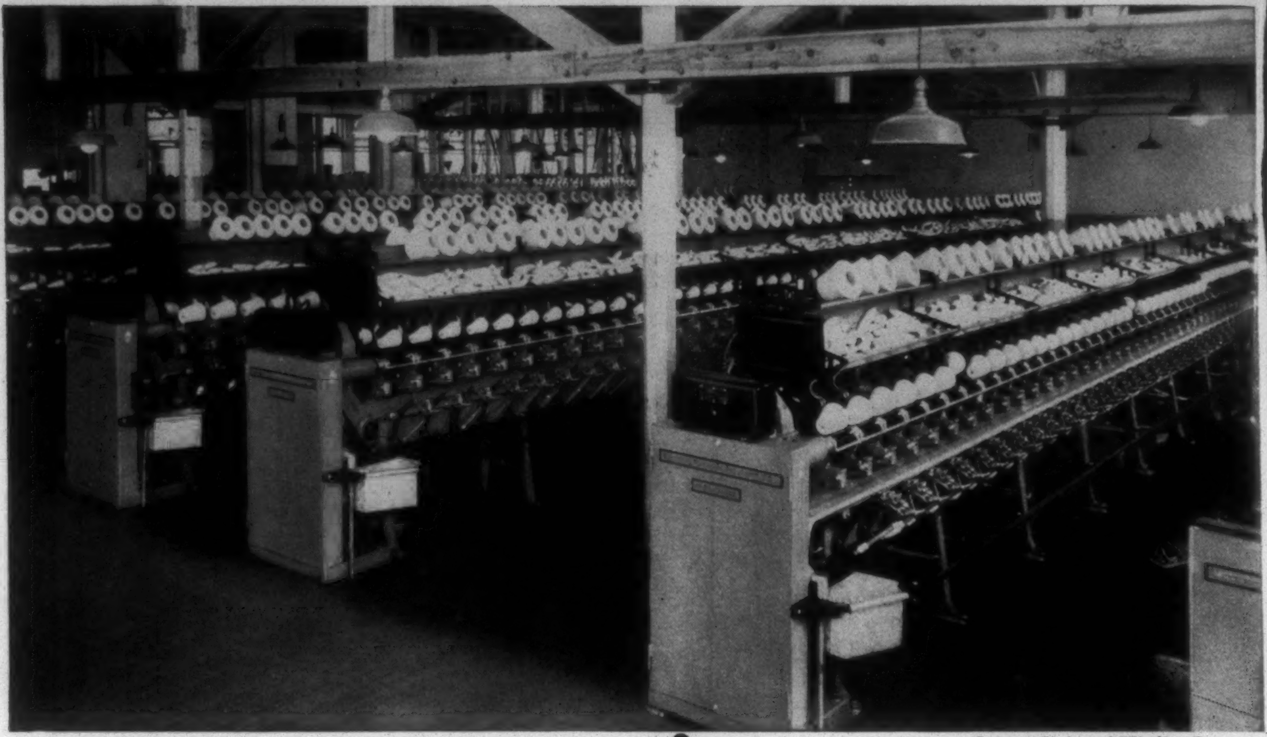

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